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ART. I.—*Cases of Erysipelatous Laryngitis, or Black-Tongue.* By A. M. KELLER, M.D., of Courtland, Ala.

In the history of the following cases, it has been my aim to give a faithful account of the *Black-Tongue*, or Erysipelatous Laryngitis, as I have had an opportunity of witnessing it in this neighborhood. I have reported every fatal case that occurred in my practice, and the treatment pursued in each. This has been unsatisfactory to me, but if I have apprehended the true nature of the disease, I have the authority of Cheyne, Ryland, Bayle, and others, for saying that it is one which is as fatal as it is rare in its occurrence. I very much regret that the prejudices of the community have prevented me from adding the information which might have been derived in these cases from post-mortem examinations. Imperfect as they are without this conclusion, I still hope

that they will be found to add something to the history of this very formidable affection.

Case I.—This disease made its appearance first among us in the person of Mrs. T., aged about 25 years. She was attacked on the 7th of February with a severe rigor, pain in the head, back, and through the hips; having been very irregular in her menstruation for the previous seven months, her physician readily conceived her symptoms to arise from the menstrual effort, and treated her accordingly. I was called in the absence of her attendant to treat the case.

February 10th. Pain in the back, headache, and sore throat, externally on one side very much swollen, and great difficulty in swallowing; general uneasiness through the chest; hissing inspiration; cough; sensation of immediate suffocation. Upon looking into the throat, the top of the larynx, uvula, and fauces were found intensely inflamed and swollen, with patches of lymph adhering; pulse 120, and very compressible. Emetic of ipecac., friction to the throat, with vinegar, capsicum, blue mass, and rhubarb. Pediluvia of hot salt and water.

11th. Pulse 120; great thirst; tongue heavily coated with a dirty greyish fur; bowels freely operated upon; antimonial mixture every two hours; dilute muriatic acid gargle.

12th. Remission in all the febrile symptoms. Saline laxative, and a blister to the throat

13th. Symptoms aggravated; mercurial cathartic; antimonial mixture.

14th. Tongue perfectly black; fauces and nostrils stuffed with offensive exudations of lymph; difficult respiration; aphonia. Emetic of ipecac., mixture of turpeth mineral and ipecac. freely rubbed on the surface of the tongue; strong solution of nitrate of silver to the fauces.

I had the satisfaction to see the symptoms of throat disease all abate the 10th day; but in its place the true character of the disease manifested itself in an extensive erysipelatous eruption on the face, with general soreness of the whole surface.

Sulph. morphia to procure sleep; purgative of cal. and ipecac.; evaporating lotions to the erysipelas.

Unfortunately my patient proved to be three months advanced in pregnancy, and after a few uterine contractions a dead fœtus, putrid and offensive, was expelled. The placenta was not all removed at once, but came away piece-meal for two days. Irritative fever was set up, and this lady died in six days after the happening of abortion; but for this the above case would have terminated favorably. Every symptom of laryngitis was gone—tongue clean, respiration free and natural, deglutition easy.

Case II.—Miss E. P., aged 18 years, attacked with a chill, fever, and sore throat on the 7th of April.

9th. Tongue dry and heavily coated; fauces inflamed; difficult deglutition; spasmodic cough. Emetic of ipecac; mustard poultice to the throat; purgative of cal., ipecac. and pulv. ant.; muriatic acid gargle.

10th. Throat so much relieved that the patient ventured from her room and remained several hours.

11th. Relapsed. Violent return of throat disease, with all its attendant symptoms; pulse 120. Emetic of ipecac.; antimonial mixture; liniment of hartshorn, spirits turpentine, capsicum and lard.

12th. Erysipelas on face and scalp producing delirium, nervous excitement, and death on the 14th.

Case. III.—Negro girl Scilla, aged 13 years, attacked May 3d with chill, fever, and all the attendant symptoms of sore throat. Emetic of ipecac.; purgative of cal., ipecac., and scam.; muriatic acid gargle.

5th. Blister to the throat; solution of nit. potash, gum arabic, and sacch. album, every two hours; solution of nitrate silver to the fauces.

7th. Fever subsiding; throat better. This patient recovered, without any eruption, in a few days.

Case. IV.—Betsy, aged 35, attacked May 13th with chill, fever and sore throat.

14th. Pulse 110, full and strong; fauces much inflamed;

epiglottis swollen; one side of the neck swollen and very painful. Venesection to 12 ounces; blister to throat; emetic of ipecac.; gargle of sage tea and alum; cal. and ipecac. at night.

15th. Castor oil and antim. mixture through the day, and morphia at night.

16th. Throat partially relieved; violent pain through the head; cold cloths applied constantly to the head, and a blister to the nape of the neck.

17th, 18th, and 19th. Pain in the head unabated; continue cold applications, and castor oil daily as a purgative.

20th. Excessive purulent discharge from both ears and the nostrils, which continued for a week so copious and offensive as to require fumigations of burning tar constantly in the room. This patient became very much prostrated from the discharge, but gradually recovered her health in six weeks under a mild tonic treatment, mild laxatives, and attention to the discharge. Hearing remains much impaired.

Case V. Carmichael, a negro man, aged 30, attacked on the 31st May with chill, fever, and sore throat; pulse quick and feeble. Treated with emetics, mercurial purgatives and a blister to the throat.

June 4th. Throat better; erysipelas on the face, and in 24 hours extended over the whole scalp. Constant delirium, picking at the bed-clothes. Upon consultation, venesection to 12 ounces was practised, and evaporating lotions to the head; blood in a few moments separated into a small quantity of serum, about two ounces of red crassamentum, and the remainder a yellow jelly-like substance—lymph. Died on the 8th of June. This patient, I was informed, after his death, had labored under syphilis for the three months previous to his last illness.

Case VI.—Kesiah, aged 25, attacked 1st of June with the usual symptoms of throat disease. Treated with emetics, antim. diaphoretics, purgatives of cal. and ipecac., and blister to the throat.

3d. Throat much relieved. Erysipelas on the whole of

the right leg, pain intolerable; poultices and tepid affusions to the limb; cal. and ipecac. every three hours, after the fourth dose, purgative of castor oil. Cuticle cracked to the extent of four inches on the leg; offensive semi-purulent discharge. Intellect clear; swallows without pain; no indication of thoracic or abdominal disease. Died on the 7th. This patient also labored under syphilis for sometime previous to her attack of sore throat.

Case VII. Charles, aged 16, attacked June 1st with the usual symptoms of the epidemic. Treated with an emetic, blister to the throat, cal. and ipecac. quantities sufficient to act freely on the bowels. In two days convalescent.

4th. Relapsed from imprudence in eating. Erysipelas over the face and scalp; eyes entirely closed from the swelling; constant stupor; pulse 120. Blister to the nape of the neck; purgatives of calomel and scammony; slippery elm poultices to the face. Under this treatment the erysipelas gradually left him with intense soreness over the whole surface. Under the use of mild laxatives, and quinine occasionally, he recovered in a month and went to work.

Case VIII.—Sally, aged 45, of broken down constitution, attacked 6th of June with sore throat, accompanied with constant vomiting. Blister to the throat; cal., opium and ipecac. every three hours; stimulating enema next morning; solution of nitrate of silver to the throat. On the fourth day, without any amendment of the throat disease, erysipelas appeared on the face and scalp. On the sixth day, tongue black; varied applications of cold and warm water, and poultices of flax-seed; blisters to the nape of the neck. Mercurial purgatives daily until the 13th, when she became totally unable to swallow anything. Turpeth mineral and ipecac. to the tongue with no benefit; uvula entirely destroyed by ulceration. Died on the 16th day of disease.

Case IX.—Scott, aged 27, attacked with the usual symptoms, and was treated successfully with emetics, venesection, mercurial purgatives, and a blister to the throat. Went to the harvest-field and labored for three days, was caught in a

shower of rain. Erysipelas occurred on the same day over the face and scalp. Treated by cupping to the back of the neck, mercurial purgatives, and occasional opiates, cold affusions to the head, all of temporary benefit, however, and this patient died after lingering two weeks. No evidence of thoracic or abdominal disease. The latter may have been obscured by the brain affection.

Case X.—William, aged about 30, has labored under syphilis for several months, attacked July 8th with slight throat disease. Treated by an emetic and purgative; poultice of capsicum to the throat; walked about the yard for three days and supposed himself well. I was requested to see him on the night of the 14th; violent pain and erysipelatous swelling of the left thigh; no soreness of throat or other symptoms of the epidemic. Pulse 100; venesection to 10 ounces; calomel and opium; poultices constantly applied to the limb.

15th. Symptoms all aggravated; no mitigation of pain; patient begged to have his leg cut off, and let him die easy at least: cupping and blisters to the limb. Repetition of calomel and opium, with castor oil; no relief, however, and this patient died of excessive pain on the morning of the 16th, 36 hours after the relapse.

I have notes of 20 other cases on the same plantation on which the last seven cases above occurred, which recovered. Four had the erysipelatous eruption on the face alone: one had it on both his legs, and the remainder had sore throat without any eruption; some recovering in five or six days; and others, in which the bronchia and lungs were involved, recovering in from two to three weeks.

Case XI.—Mr. S., aged about 28, attacked on the 31st May with the usual symptoms of the epidemic. Treated with an emetic, purgative, mustard poultices, and astringent gargles for two days. On the 4th and 5th June he rode into town. Relapsed on the evening of the 5th. Pulse 90; slight sore throat.

7th. Erysipelas on the face, and extending over the scalp in 24 hours. This patient became a perfect fright from the swelling, and size of the head, and the offensive discharge from the whole surface of the face. Treated with occasional purgatives of blue mass and ipecac., cal. and opium, antim. diaphoretics, the warm bath, blister to the back of the neck, flaxseed poultices to the face, and varied applications of cold and warm affusions to the head. The pulse never rose higher than 100 during the whole period of his illness. For several days he was so delirious as to require restraint in order to keep him in his house. He finally recovered, and on the 1st July was able to walk across his room.

Case XII.—Mrs. S., is the last, and by far the most interesting case I have to notice. She has labored for several years under liver disease, and in her general appearance presents much of the scrofulous diathesis. She was attacked on the same day with her husband, with the same symptoms of the epidemic. Treated by venesection, emetic of ipecac., blue mass, and ipecac. as a purgative; mustard to the throat. In three days she was so much relieved as to be able to walk about the yard.

June 4th. Relapsed. Erysipelas on the face on the 5th. Gave birth, on the morning of the 6th, to an eight months' child. This patient vacillated between life and death for a week. She was treated in the usual way for the erysipelas, which declined on the face and made its appearance on the hips and loins. Its progress was partially arrested by blistering in advance, but it terminated in large abscesses—one in the gluteal region: one at each hip joint: one in each groin: one under the chin: one under the eye, and one on the right side of chest. From as near an estimate as could be made, the three first-named abscesses discharged every twenty-four hours a quart of unhealthy fœtid matter, for three weeks. The abscess on the gluteal region discharged for one month and a few days.

Every means that could be suggested, by four physicians,

was used to arrest this destructive discharge. Internally, mild laxatives, infusion of sarsaparilla, tincture iodine, hydriod. potash, port wine, and a sustaining diet. The roller bandage to both legs. She became so helpless and feeble, that it was a matter of life and death with her to submit to the necessary means of comfort and cleanliness. The local treatment consisted of bark poultices, stimulating injections, nit. silver, tinct. aloes, and myrrh, &c. Death took place on the forty-ninth day after the attack. She was too weak to be moved at all for two days previous to her death, and lay for two weeks a mass of flesh—loathsome to herself and almost intolerable to her friends. Upon minute examination after her death, I found the whole gluteal region sloughed away on one side—the ilium and sacrum exposed. The abscesses which pointed at the hips had burrowed, downwards, nearly to the knees, and communicated with the one on the ilium above. The infant died in a month after its birth of erysipelas of the face.

All the cases I have reported, with the exception of the first two, occurred on the same farm. All who waited on the sick had the disease in one or the other form, and from its whole history in this family, it certainly assumes the character of an infectious disease. It was carried to this plantation in the person of a negro from a farm six miles distant. No local cause could be discovered to originate the disease; but after its appearance, its character became more malignant, from the excessive heat of the season, and the crowding together of negroes in small and ill ventilated cabins.

A large open shelter was erected about a quarter of a mile distant in a grove, and all who could be spared from the sick were removed to it. The old cabins were thoroughly renovated, and washed with lime. In about ten days the negroes were moved back again, and only two more cases of the disease occurred.

In its incipient stage the disease appears to be manageable

in most cases, by emetics and stimulating applications internally, and externally to the throat. A relapse almost invariably terminated in the erysipelatous eruption. In a few cases among children, the eruption was miliary and easily managed.

Courtland, Ala., August, 1845.

ART. II.—*An Account of Epidemic Erysipelas, as it occurred at Columbia, Tennessee.* Read to the Medical Society of Tennessee, at its meeting in Nashville, May, 1845. By H. R. ROBARDS, M.D., of Columbia, Tenn.

In lieu of the case which I was appointed to report at this meeting of the Society, I beg leave to submit a few remarks on the nature and treatment of a malignant and fatal epidemic which visited Columbia and its vicinity during the early part of the spring of 1844. So many accurate accounts of this disease as it occurred in various parts of the United States have been given by different writers, that it is with some degree of distrust that I venture to add to the number of reports and essays on the subject, nor should I have done so but for some peculiarities connected with its history as it prevailed in my neighborhood, which I have not seen mentioned by other writers. The facts connected with what I shall say of the disease are taken from notes made at the time, and very soon afterwards.

The first well-marked case that fell under my observation appeared about the last days of February. The weather had for sometime been dry and cold; the winter, with the exception of an epidemic measles that prevailed in the early part of it, had been unusually healthy, and there was not a case of this disease, so far as I am able to learn, within two hundred miles of that place in a straight line, at the time. This is one of the peculiarities to which I wish to call the

attention of the Society, connected as it is with the causes of epidemics, a subject to which we cannot give too much attention. Why an epidemic erysipelas should, in its progress, have leaped over so many other places, and fixed itself upon a spot usually as healthy as those which escaped, is a question of great moment to every one, and of deep interest to the enquiring mind; but as I have no settled opinion to offer as to the causes of epidemics, I shall pass this part of the subject over, merely remarking that the notion of Sydenham, usually regarded as visionary, that the causes of epidemics have their origin in the bowels of the earth, is to my view nearer the truth than any one subsequently suggested. When a disease progresses in a given direction, or confines itself to particular localities or seasons, the existing causes of them may at least be inferred. The cholera, for instance, though exceedingly excentric in its movement, was thought to be most partial to such localities and seasons as afforded exciting causes which co-operate with the remote cause in the production of the disease. But in the case now under consideration that there should have been anything in the location of Columbia or in the weather, calculated to predispose or excite erysipelatous fever, can be determined only from the effects.

The symptoms of this disease, as it occurred in Columbia and its vicinity, correspond so accurately with those given of it by other physicians, as it prevailed in different parts of the United States, that I deem it altogether unnecessary to give at this time more than a few of the peculiar features by which it was characterized.

It was not only the fact in Columbia, but so far as I can learn wherever the disease has appeared, that the first cases were the most violent, and taking them as a focus the malady radiated from that point, and became less violent as it spread abroad.

The disease was almost uniformly ushered in by a chill, not very severe but protracted, continuing with alternate flashes of heat, in some instances, two or three days; this was usually preceded or accompanied by soreness of the

throat. Reaction, when thoroughly established, was never very violent, and was followed by a protracted sweating stage; this generally brought the patient to about the fourth or fifth day, and during the time the tongue was covered with a whitish moist coat, and the pulse varied but little from the natural standard, of course slightly modified by the different stages. At this time, in a number of cases, the patient would seem to be rapidly convalescing, being able to get out of bed; he would now feel some thirst, or returning appetite; but if allowed to take a glass of cold water, or any mild article of food, from that moment there was no cessation of his sufferings, nor was any part exempt from the excruciating pains with which he was attacked. The peculiar nature of these pains I am unable to determine; in some instances they appeared to be neuralgic, as there was no external signs of inflammation; in others they seemed rheumatic, attacking the fibrous and sero-fibrous tissues; but there was no part exempt from one or the other, and when confined to the abdominal region were almost uniformly fatal, more particularly so when the uterus was attacked, which was generally manifested by menorrhagia; the discharge, however quickly subsided but the pain continued. The appearance of this discharge I regarded as a fatal symptom, and will venture to assert that it did not occur in a single instance which did not terminate in death. These pains often attacked the extremities, and so violent were they that the wretched sufferer would beg to have them severed from the body, if it would afford one moment's relief; after hours of intense agony nature would seem to become exhausted, and succumb to the very violence of the suffering. About the seat of pain in such cases there were often found circumscribed echymosed spots, and sometimes pendulous bags of effused grumous bloody matter. The form of the disease which I have been describing was very rarely attended with any signs of inflammation; the pulse was not inordinately excited, and, indeed, often did not vary from the natural standard; but the white

coat on the tongue generally changed its color, and assumed first a yellow hue, and then became brown and dry.

This disease assumed another form which I will now describe: about the time I have mentioned, when a crisis seemed to be taking place, the inflammation which had been more or less violent in the throat, would make its appearance on some part of the face or side of the head; the alæ of the nose, the external ear, or the skin immediately over the parotid gland, were usually the first parts on which it showed itself; from a small circumscribed spot, unless arrested, it gradually extended itself over the side of the face and head, and finally attacked the opposite side. But this form of the disease has been so frequently described, and the external inflammation was so evidently a translation or a continuation of that from the fauces where it first occurred, that I shall not dwell upon it, but simply remark that the throat, though most frequently the first part attacked, was by no means uniformly so. The extremities were sometimes the first parts upon which the inflammation made its appearance.

As to the pathology of the disease, I have but little to say, but am satisfied of one fact, that erysipelas did often attack the mucous membranes, and extended itself either upon those membranes, or to the skin and the subjacent tissues.

Two important questions now present themselves for consideration:

1st. Was the disease propagated by contagion?

2d. What was the most successful practice?

As has been the case with almost every disease, now acknowledged to be contagious, there were many who denied its contagiousness; others who affirmed it. I believe, however, that there is no physician in Columbia, at this time, who does not admit that this disease, under certain circumstances, was contagious.

To prove this fact, I will take the first case that occurred as there was then no suspicion of a dangerous or contagious disease being amongst us, and as it was of long standing, many persons were exposed, more particularly as the weather

was cold and the room consequently kept very close. Now, out of the number of persons that waited on that case, at least eight-tenths took the disease, two-thirds of whom died. But suspicions of its contagious nature having now got abroad, additional precautions were used, and in no subsequent case did so many take it from one patient; and, indeed, as I have before remarked, the power, of propagating itself seemed to diminish somewhat in proportion as it was multiplied.

That there were causes prevailing at the time, capable under favorable circumstances of producing the disease, is evident from many well marked cases having appeared where there was no exposure; still the risk of taking it was greatly increased by exposure, as was proved by the fact that when it attacked a family it was apt to go through it, and that several persons from an adjoining county, who visited their friends with it, took it themselves after they went home, and communicated it to others.

Now, the next question directly connected with the above is, could the disease be communicated in any other way than by exposure to the infected?

It would seem that this might be answered in the affirmative from the following circumstance: no case of it was known in the country until one of the physicians of the town, who was almost constantly in the rooms of those who had the disease, was called in the country to a difficult case of labor. He wore a blanket coat, as I understand, and was sometime confined in the room with his patient, during which time he rested himself upon a lounge or settee, which was occupied immediately after his leaving it by an old lady who was in attendance, who took the disease soon after and communicated it to some half dozen other old ladies, who visited her, every one of whom died. From these many others contracted it, and it became general and fatal in that neighborhood; indeed it was but little less so than in town, for during the space of five weeks, and in about five miles in diam-

eter, about thirty persons died of it; but additional precautions being now used to guard against the contagion, the number of cases gradually diminished, and by the middle of May only its vestiges remained. The precautions that were used consisted in suffering as few patients as possible to occupy one room, and keeping that perfectly ventilated. The number of attendants afforded but little inconvenience, as the well were never over solicitous to be very near the patient. I am of the opinion that the disease was not contagious, except in cases of strong predisposition, or when there was long exposure in a close room. Those persons most obnoxious to it were evidently old women, and there were probably a larger number of females generally who took the disease than males, which may be accounted for by their being more exposed and going into the open air less frequently. Children under five years of age were almost entirely exempt from it.

The sequelæ of this disease may be worthy of notice. During the month of May there were only a few cases of it occurring, and by the last it had entirely disappeared in its genuine form; but then came on the summer fevers, different from the usual form and evidently complicated with the symptoms of the epidemic, but rarely to such an extent as to exhibit external erysipelatous inflammation, though there were many anomalous symptoms that rendered the cases very difficult to treat, and much more protracted than usual, many of them persisting four or five weeks. As the fall and winter came on the epidemic peculiarity became more manifest; sore throat was common, as well as fevers accompanied with bronchial inflammation and neuralgic pains in different parts of the body that were obstinate, and seemed rather to wear themselves out than yield to any treatment.

I come now to the most important point connected with all diseases—its treatment. The disease which I have been describing is evidently of a specific character, and hence many have supposed that it requires a particular system of practice, and that no other will be successful, whether in one sea-

son or another, and under all circumstances. The fallacy of such opinions will appear evident from the success attending the treatment of this, as adopted by different practitioners in different seasons and different localities.

One physician, who lives in the north, will tell us that he treats the disease successfully with the lancet, emetics, and purgatives; another, being in a different latitude altogether, and in a different season, adopts the same plan and pertinaciously adheres to it. Every sensible practitioner, it would seem to me, must at once perceive how dangerous it is for us living in this latitude to be governed by the experience of any man living in one five, six, or eight degrees farther north or south, in the treatment of any epidemic. And until constitutions, temperaments, habits, and localities shall cease to exercise any influence over diseases, and until a specific mode of treatment shall be defined for each particular disease according to its name or class, until each constitution will bear the same amount of depletion and the same extent of stimulation, in vain may we expect the same results from any system of practice in the north and in the south, and in all the seasons of the year; and as no routinist was ever a successful practitioner, so neither can the copyist ever be. I have heard it asserted, by a distinguished physician, that the Americans were the most successful practitioners of medicine in the world. If this be true, it may be attributed to the fact, that they, less than any other nation of people, adhere to the tenets of any particular doctrine, judge more for themselves, and treat diseases according to their indications, regardless of the theory of any man or set of men. It is to be hoped that the physicians of the south-western country are beginning to investigate diseases for themselves, and trust less to the teachings of the schools. We are told by one or two writers in the northern and eastern parts of the United States, that this epidemic was treated there most successfully upon the strict antiphlogistic plan. By others, living in different sections, we are assured that the mild and expectant plan in the early stage, and tonics in the advanced stage, was the

only successful one. Now, these contradictory statements will seem much less preposterous if we will take into consideration the modifying influences of climate, locality, season and population. That the disease now under consideration, or any other of specific character, should assume such a variety of forms and types, as to demand an opposite plan of treatment as it occurs in different localities, seasons, and climates every one will admit who has observed at all, or at least who has paid the slightest attention to this important subject. No one in his right senses would think of treating a case of malignant intermittent fever in this latitude, in the same manner as experience has taught the southern physician it must be treated, in the southern part of the United States. Here, as my own experience has proved to me, we may bleed not only with safety, but in many instances with the effect of cutting short the chill at its very accession.

Such practice, there is good reason to believe, would be most inevitably fatal farther south. Again, we are told by Dr. Graves, that erysipelas prevailed in Dublin as an epidemic one season, and demanded the most active antiphlogistic treatment, but that as it prevailed the next season, tonics and stimulants alone could be relied upon from the very commencement. I might refer to many examples of a similar nature, and to a thousand instances of the fatal effects of persisting in a system of practice that has proved successful in one locality or season, and therefrom arguing that it must do so always and every where. What, for instance, has gone with Dr. Rush's far famed "ten and ten," in the treatment of yellow fever? Why is not the lancet in the hands of every practitioner in the south, as directed by him and Dr. Smith of London, in the treatment of fever? Why is not the cold bath uniformly successful in the treatment of typhus fever, as it was in the hands of Dr. Currie? Why has it not been so even in Europe since the one or two seasons it was so extensively used there? Why, in the treatment of congestive fever, in this climate, do we not go armed with a phial of quinine in one hand, and of capsicum in the other, and bid defi-

ance to its terrors, as the southern practitioner does? I need not tell those who have tried it, that it will not do. Again, why do we not fear, in the treatment of all fevers in this country, at this time, the effects of emetics, saline purgatives, watery discharges, collapses, &c., as we did so justly two or three years after the cholera had swept over our country, and left its remains to modify every disease that occurred? I need not say to every practitioner present, that the causes which produced a tendency, in almost every case that occurred of whatever nature, to those gastro-enteric affections has gradually but perceptibly disappeared, leaving behind no other evidence of their having existed, stronger than a groundless prejudice against remedies which, under different circumstances, are most useful. I have dwelt upon these preliminaries before proceeding directly to the treatment of this disease, because I deem them of importance, and I am confidently of the opinion that a want of attention to these facts has done more to bring disrespect upon the profession, and subjected it to more slurs and opprobious epithets than any thing else. Why do doctors so often differ, and why is there so much uncertainty in the practice of physic? There are many diseases, of course, beyond the reach of our art, and many so obscure that a correct diagnosis is most difficult; but I believe if every physician when he sets out, had to study general principles alone, and afterwards learned at the bedside of his patients to discriminate and mark the changes that modifying influences are constantly producing in the character of diseases, much less difference of opinion would exist, and far better success would attend the practice. I presume there is no one who has treated as many as half a dozen different epidemics, without having felt what that most accurate of all observers in medicine, Sydenham, confessed he experienced on the first appearance of every epidemic, namely, a great difficulty in determining what course would be most successful, and the painful necessity of experimenting with the first four or five patients before he was satisfied. Now

how much better to do that than to form an opinion at once and adhere to it throughout, whether right or wrong. I do not suppose there is a gentleman present, who does not know that the diseases of this country are constantly changing, and that in no two years do they require precisely the same treatment. How erroneous it is, then, to say that because a disease is inflammatory, we must bleed and purge actively; or that in fevers any one remedy, or any class of remedies, must invariably be used.

Measles is an inflammatory disease, for instance, and I have seen it bear, and even demand bloodletting and purgatives; yet as it occurred in Maury county, two winters ago, that practice was uniformly fatal; hence it became almost proverbial that old women treated the disease better than the doctors. The same thing I have known in scarlet fever; I have also known the subjects of the summer and autumnal fevers of that county to bear bloodletting well one season, and sink under them the next.

But I must now come to the treatment of erysipelatous fever. As may be inferred from the foregoing remarks there was a variety of opinions among the physicians of Columbia, alike as to the nature and treatment of this disease. Some regarded it as a purely inflammatory sore throat, and treated it by active depletion—bled, puked, purged in all instances; others regarded it as a modfication of vernal intermittent and treated it accordingly, keeping in view, however, the inflammatory character. One of the number thought it typhus, and gave tonics and stimulants after the first few days. But the state of things presented by our town so accurately corresponds with what Dr. Ramsey, a very intelligent physician of Knoxville, in answer to some questions I put to him relating to the treatment of the same disease as it appeared in that place, describes, that I will give it in his own words. "The treatment," he says, "was in accordance with the pathological views before mentioned. One physician bled, and purged with jalap; another bled, and, in some cases, he thought, with advantage, but in others with manifest disad-

vantage, as great depression followed even the loss of a small quantity of blood, while another prescribed with a care, almost approaching to the expectant practice. The comparative mortality from the first two methods of practice I cannot give, for I do not know the mortality of the disease as shown by the symptoms of the patients thus treated; but more patients died who were treated on the vigorous antiphlogistic plan, than of those who were treated by the plan indicated by rational observation. A comparison cannot be drawn between the expectant practitioner and the others, for he had not as many patients under his care; but he did not lose a patient. He used laxatives after one purge, and very small doses of ipecacuan as a relaxant, not in sufficient doses to nauseate, and upon the subsidence of the febrile and inflammatory symptoms, gave stimulants."

Such I have said was very nearly the state of things in Columbia. My own observation and experience sustain the observation of Dr. Ramsey, that more patients died who were treated on the vigorous antiphlogistic plan, than of those who were confided more to the powers of nature.

It will be remembered that I have noticed two forms of this disease;—one in which the inflammation made its appearance externally; and another which was attended with violent neuralgic or rheumatic pains. As to the latter, I do not know what would have been the best practice, for every case that I saw or heard of, in which those pains were violent terminated fatally. I saw but one, and the subject of that was a young lady. I treated the case at first with a brisk purgative, and afterwards with broken doses of calomel and ipecacuan, anodynes, and the warm bath. The disease attacked the stomach and bowels in the first instance, and afterwards extended to the uterus. It was after the fourth or fifth day of the disease that her sufferings commenced, but from that time to her death, which occurred on the tenth, the only thing that gave her one moment's relief was the warm bath; and that was only temporary. Anodynes made no impression. I will mention one peculiarity about the

tongue in this case. At first it was lightly covered with a yellow bilious coat; but about the same time that the pains in the abdomen commenced, the tip assumed very much the appearance of plum jelly; the redness then extended along the edges and up the middle. Her grand mother, an old lady, had the same form of the disease; though in her case the pains attacked the extremities; she was bled and purged freely, but lived only a few days. There were others who were treated very actively, and in all the result was unfavorable. As to that form of the disease which attacked the throat, and extended to the face, head, &c., and which was by far the most common, my experience was that it was easily treated, since I did not lose a case of that kind.

My practice consisted chiefly in relieving the biliary symptoms, which were constant, by a brisk calomel purge, followed by a dose of senna and salts, or cream of tartar. Afterwards my aim was to keep up secretory action. I usually gave very small doses of calomel and ipecacuan, and occasionally a small quantity of senna tea, to carry off the accumulation of vitiated secretions from the bowels. This course was often varied according to the indications, but in no case did I bleed profusely, and but once at all. Emetics may have been of service, but I never used them. For the throat I sometimes used the chloride of lime, and at others, tincture of myrrh and creosote. To arrest the inflammation in the skin I sometimes surrounded it with a strip of blistering plaster, but believe that it was best to cover the whole inflamed surface with a blister, for as soon as the suppuration was established the disease generally subsided.

It may be asked why I did not bleed and purge more freely? My reply is, because the indications were not that way. The excitement of the pulse was not commensurate with the other signs of inflammation; and, besides, I saw at an early period, that those who bled were not apt to cure their patients.

Columbia, Tenn., 1845.

ART. III.—*A Case of Inflammation and Suppuration of the Colon, excited by the presence of a river pebble—its discharge after remaining in the bowels seven years, and recovery of the patient.* Read to the Medical Society of Tennessee, May, 1845. By J. IRWIN, M.D.

Miss A. M., aged 16 years, of plethoric habit, was attacked with severe pain in her right side in February, 1842. When I saw her, I found her with a soft and regular pulse, skin natural; tongue clean, and feet cold. In this attack she was confined to bed for two months; the treatment consisted in cupping, leeching, blistering, and fomentations, with purgatives, and the usual remedies, but all afforded no relief. Nothing gave her any relief except morphia; while the system was kept under its influence she complained of no pain, although there still remained great soreness of the side, and this was so great that when she was able to go about the house, she could not bear her clothes to be fastened on her.

In the winter of 1843, she had a similar attack, which I treated with anodynes alone, and she was soon able to be about again, although she still complained of the tenderness of the side. I proposed a seton, but she objected so much that I declined trying it. During the ensuing fall she suffered severely for five or six days with violent acute pain in the same region as formerly, which was relieved as before by morphia, but the soreness still remained. In the following March she was again attacked with acute pain of a throbbing character; her skin and tongue, however, were natural; her pulse soft and regular; bowels costive. I gave her a dose of aloes, rhubarb, and scammony, which operated four times freely, and in one of the discharges there passed from the patient a lump about the size of a nutmeg, which on examination by her mother proved to contain a small irregular pebble, such as is found in rivers and creeks. From this time forward she recovered rapidly, the soreness in her side declined, and she felt nothing of it for six or seven months, when in attempting to learn to weave she strained herself, and was

again taken with violent throbbing pain at the same point, which continued for seven or eight days, the side being swollen and very tender on pressure; her stomach became irritable, and in attempting to vomit, she said she felt something break inside, and could feel a fluid run. A few hours after this occurred she had a discharge from the bowels, which consisted chiefly of pure, well-digested pus. The quantity was considerable, and the discharge continued for seven or eight days, when it ceased altogether, and since that time the patient has enjoyed good health and has never complained of her side.

The account given to me by her mother of the introduction of the pebble into her stomach was, that when a child, 7 or 8 years of age, she was in the habit of playing with the pebbles from the river, frequently going to sleep with them in her mouth; in this way, it is supposed, one was accidentally swallowed, and lodging in a fold of the colon remained there for seven or eight years, giving rise to the train of symptoms described.

Nashville, May, 1845.

ART. IV.—*Two Cases of Parturition, with Remarks.* Read before the Medical Society of Tennessee, at its Annual Meeting, in May, 1845. By JNO. W. RICHARDSON, M.D., of Rutherford county.

CASE I.—On the night of the 28th of January last, I was summoned to see Mrs. Y. in her fourth labor. She had been the object of many remarks by her neighbors for more than two months, on account of her great size, the general conclusion from which was that she would have a plurality of children at her confinement. I had noticed her occasionally myself, and the enormous size of her abdomen had excited

some uneasiness in my own mind, especially as I understood that I was to be her accoucheur.

When I arrived she was sitting by the fire, and we had rather an amusing conversation about her size, which was frequently interrupted, however, by the recurrence of labor pains. She said she had suffered immensely for several months, and looked to her confinement "with awful fears."

As the pains were pretty severe, and had commenced some six or eight hours before, I requested her to take the bed in order that I might make an examination. I first explored the abdomen, and have often wished since, that I had measured it; but as I did not, I will not venture to say how large I thought it was, lest I should be considered extravagant. A Dutchman once said of one of his fatted animals, that he was "*bigger lying down than standing up;*" and so it seemed with my patient.

On examining per vaginam the os uteri was found dilated to the extent of an inch or more, soft and yielding. The bag of waters presented finely, but I could touch no part of the child. I endeavored to quiet the apprehensions of my patient, but at the same time felt rather uncomfortable myself. After some two hours, the pains still recurring at regular intervals, and occasional vaginal examinations disclosing nothing more satisfactory than at first, with the exception of a slight advance of the waters, I determined to rupture the membranes. The consequence of this operation was a prodigious flow of liquor amnii. The woman was literally deluged, and although I commenced calling for sheets with which the most of the water was absorbed, still it ran through a thick quilt four double—through the bed, and some distance on the floor.

The abdomen was now soft, the skin wrinkled, and so pendulous, that it actually hung down over the pubis. I examined per vaginam again, but could feel no child. The uterus was quiet, and the woman expressed great relief. After some ten or fifteen minutes, the womb contracted freely, and I touched the child's head.

My anxieties were now all allyed, and the woman was shortly afterwards delivered of a *small* deformed child. She did well, and recovered rapidly.

Remarks.—Delivery was retarded, in this case, on account of the superabundance of liquor amnii, which had stretched the uterus so much as to destroy, to a considerable degree, its contractile power; and although the uterine contractions may have been as great as usual, still the great quantity of water must have destroyed much of their force, or in other words, have prevented their action on the child.

My experience is that a superabundance of liquor amnii is as bad for the child as a deficiency, and causes the woman much more pain in gestation.

Case II.—On the morning of the 31st of last January, at 4 o'clock, I saw Mrs. S., who was confined with her tenth labor. She had never had a physician with her in any previous confinement, but a considerable hemorrhage, which come on two or three hours before, had alarmed her so much, that she readily consented to a proposition from her husband to send for me.

Shortly after the commencement of the flooding she had labor pains, but they were feeble, and recurred at long intervals. An examination satisfied me that the bleeding was not sufficient to do any harm. The child's head presented, and the pains increased slowly. The os tincæ was open, very dilatable, and the waters were collecting finely. The hemorrhage recurred occasionally in small quantities until 9 o'clock, when she was delivered of a small male child, the presentation being the fifth of Baudelocque. The labor was easy, and there was no occasion for any interference. The smallness of the child excited my suspicion that the case might be one of twins, and accordingly, before I could tie the cord, and deliver the child to the nurse, the mother said, "Doctor there is another one." By placing my hand on her abdomen I discovered that she was correct. As soon as possible the

cord was tied in two places, divided between the ligatures. and the child disposed of.

In a few moments the uterine pains returned, and I examined for the placenta, or another child. The placenta presented, and after unusual efforts was forced down so low in the vagina that I removed it. I then examined for the second child, but what should I find but another placenta presenting at the mouth of the womb? The uterus began to contract powerfully and almost without cessation. The placenta protruded considerably from the mouth of the womb, so as to lie in the cavity of the sacrum, but yet I could not remove it by such force as I felt justifiable in using.

Having learned nothing yet about the presenation of the child, I felt some uneasiness, though I expected, as is usually the case with twins, that the feet or breech would present, as the first had been a head presentation.

The loud complaints of the woman, her constant appeals for "help," and the incessant contraction of the uterus, rendered me more uneasy, and I determined to ascertain what was the source of the difficulty. I broke through the placenta with my finger, ruptured the membranes, and found a hand in the placental bag.

As it was impossible to remedy the position of the child, or even to ascertain its position correctly whilst the placenta remained, I determined to remove it, which I did pretty quickly, though not without leaving a large portion of the membranes behind.

An examination now disclosed the following state of things: the right hand near the vulva, both feet in the pelvic cavity, opposite the plane of the right ischium, and the head engaging the superior strait, after Baudelocque's first presentation.

As quick as possible, I caught hold of both feet with my left hand, and with the point of the index finger of the right hand against the head, I endeavored to chage the position of child, and deliver by the feet. Two efforts convinced me that it could not be done, for there had been no relaxation of the uterus from the instant the waters escaped, and every

moment made the case more difficult. Grasping both feet as firmly as I could with the fingers of the left hand, I resolved on pushing them back into the uterus. Slowly, but firmly and resolutely, they were pushed up until they reached the brim of the pelvis, when by a little dexterity with the points of my fingers, they were sent back into the womb.

The head of the child advanced now rapidly, with the arm by its side, and the woman was delivered in two minutes of another male child. The second child was small, though larger than the first, and to my great mortification was born dead. It was alive at the birth of the first one, for the mother told me she felt it distinctly. The labor was over by 10 o'clock, and at 12 I left my patient doing as well as usual, expressing great obligations to me, and rejoicing that she had sent for "the Doctor."

Remarks.—This was a singular and interesting case, rendered so by the peculiar position of the second child. Was this the natural position of the child, or was it made to assume this position after the delivery of the first?

My opinion is that the second child changed its position entirely. I believe that it occupied the right side of the womb, with its back to the right lateral part of the abdomen of the mother, and that the first child lay in the left side of the uterus. When the first was delivered both placentæ were detached from the womb, and from some examination I was induced to think that they were slightly attached to each other. The placentæ came down between the second child and the left side of the uterus. The second child, I think, was made to change its position during the relaxation of the uterus, immediately after the birth of the first, the head following the course in which the placenta left the womb, and the breech thrown up nearly to the position which was occupied by the head. Had not this occurred the second child would have presented the breech, with the right buttock to the left acetabulum, the left to the right sacro-iliac symphisis, and the back to the right lateral region of the abdomen of the mother. These remarks are only conjectural, and you can

take them for what, upon examination, they may appear to be worth.

It is certain that the child could not have been delivered if it had been permitted to remain in the position in which I first found it, with one arm, both legs, and the head all engaged in the superior strait.

Such a position would have sounded to me rather fanciful before I saw it, and it may perhaps seem so to you. But when we recollect that the woman was large, well formed, had a capacious pelvis, and was in her tenth labor, with two small children, we will be better prepared to understand this anomalous presentation.

The death of the second child was caused no doubt, by the separation of its placenta, something like an hour before the child was born. There was no other cause that I can assign for it, for no force sufficient to injure the child was used, and its mal-position was corrected before the contraction of the uterus could have produced its death. Both placentæ were detached from the uterus at the same time.

I am reminded by these occurrences of the first case of twins that ever I encountered, and I will trespass so far on the patience of the Society as to give a brief recital of it.

The subject was a lady, the wife of a neighbor, and the case occurred shortly after I commenced the practice of medicine. The patient was delivered easily, and in good time, of a fine child, and as I was pressed with some other cases, I left her, in the care of an old midwife, doing as well as usual.

I had barely arranged my business at my office, and was on the point of setting off to visit some other patients, when I saw the husband of the lady riding by in a brisk pace. "Halloo!" I called out, "which way?" He laughed, and replied that he "was going over to town to get some things to make *more baby clothes*," his wife having had another child since I left her! I was not a little surprised, nor less mortified at my oversight. However, the family were amiable, and besides were my fast friends, and I never heard of the

matter afterwards to my prejudice; but it taught me a useful lesson, which I have never forgotten, which is this—always carefully to examine the abdomen of the parturient woman before the birth of the child, and never leave her until I am satisfied that there is not another.

May, 1845.

ART. V.—*Case of a Gun-Shot Wound in the Back, followed by Hæmaturia, but no other alarming symptom.* Read before the Medical Society of Tennessee at the Annual Meeting in May, 1845. By J. W. STOUT, M.D., of Nashville, Tennessee.

Hæmaturia following a wound in the region of the kidneys, the bladder, or the urethra, generally warrants the conclusion that one of these organs has been injured. During the early part of the last year I was called to visit a young man, about 21 years of age, who had received a gun-shot wound; he was very robust and muscular, rather inclining to corpulency. Upon examination I found that the ball had entered on the right side of the spine, below the ribs at the superior and posterior part of the right lumbar region, at a point behind which the kidney of that side is situated; he complained of great pain at the seat of the wound; he was in the erect posture at the time he received the wound. Upon probing it, the direction of the ball was ascertained to be not directly inward, but between the layers of the abdominal muscles. His wound was dressed, and an anodyne administered, which somewhat composed him, but did not induce sleep. The day following I visited him in conjunction with Dr. F. Robertson and Dr. Smith, and found him without arterial excitement, or any alarming symptom whatever. We ordered warm fomentations to the wound; about 10 o'clock he evacuated his bladder for the first time since the receipt of the injury, and instead of urine the fluid discharged was blood,

about the same in quantity as an evacuation of urine would have been after such delay. Still no other alarming symptom presented itself; we prescribed emollient drinks, and nauseating doses of tartarised antimony; his urine during the whole of this day was tinged with blood, but on the day following this symptom entirely disappeared, and his bowels were moved without assistance; the wound looked healthy, but did not suppurate until the subsequent day. His recovery, after the suppuration commenced, was very rapid. The lodgment of the ball was never ascertained satisfactorily; but he has not experienced any inconvenience from it since his recovery.

Could the hæmaturia, in this instance, have been occasioned by a wound of the kidney? It cannot be supposed that it resulted from an injury of the bladder or urethra. From the rapidity of his recovery, and the fact that the symptom indicative of wound of the kidney existed for a single day only, as well as the absence of all abnormal indications in the urine after this time, I believe that the kidney was not wounded. This opinion is still further strengthened by the consideration that in a wound of this viscus, the patient can hardly escape extravasation of blood or urine, yet in the case reported not the slightest indication of either of those conditions existed. It is true that blood might have been extravasated in this region without the occurrence of any of those urgent symptoms which follow it in other abdominal regions, since the irritation which it induces in the peritoneum in parts covered by that membrane could not have existed, the kidneys being behind and uncovered by the peritoneum; but extravasation of urine is everywhere followed by the worst effects, and is productive of great danger to the patient.

From the proximity of the kidney to the seat of the wound might not the concussion occasioned in that viscus have been the cause of the discharge of blood? Might it not have occasioned a rupture of some of the small vessels of that highly vascular organ? if not so, might not the congestion in-

duced in it by its nearness to the seat of injury have occasioned a rupture in some of its delicate vessels, the hemorrhage thus induced affording relief to it, and preventing any bad effects that might otherwise have ensued, thus affording an instance of nature interfering to effect what art and sometimes fruitlessly undertakes?

May 1st, 1845.

ART. VI.—*Case of Injury of the Leg resulting in Mortification and Death.* By JESSE HARVEY, M. D., of Harveysburg, Ohio.

A. M., aged 20 years, a healthy young man, was jumping with some others, about four months ago, when he stepped into a hole in the ground and twisted his ankle. He felt at the time not only severe pain in the ankle, but also a sharp pain on the outside of his leg, about four inches below the knee joint. This put an end to his exercises, but he continued to walk, although he experienced some pain at the ankle as well as below the knee. Once, in the course of the three succeeding months, the leg swelled below the knee and laid him by for a few days, when he was able to go again.

About five weeks ago it began to swell, and to pain him much more than it had ever done, both at the ankle and below the knee; it was bandaged and thought to be relieved, and he continued going on it two weeks longer; the bandage failed, however, of producing the relief it had done, and the swelling below the knee increased rapidly and extended downwards.

At the first visit, 22d of June, I pronounced it a case of fracture of the fibula, a few inches below the upper extremity, and consultation, on the 23d with Drs. Fisher and Corlis, confirmed my diagnosis.

The general system by this time had suffered considerably, and with some trifling hope, but at the same time fearing the

worst, we determined to try the effect of a few emetics, in case he should bear them, to produce if possible absorption; but we found the stomach much more irritable than was anticipated, and that the emetics could not be borne. We then commenced an alterative course as follows: ℞ calomel grs. iv., ipecac. grs. ii., opium gr. ½, one to be taken every four hours until a manifest improvement was made.

This course was continued until the 30th, when he appeared to be sinking, having no desire for food of any kind. Wine was allowed, and next day he felt some desire for food; tongue very red; pulse about 100, as it had been for several days, and small. At the second consultation with Doctor Corlis, the wine was discontinued, and an incision was made into the tumor, as it appeared evident on percussion that it was filled with pus. Very little of this however was discharged; cold poultices were applied, and powders of calomel, ipecac., morphia, and camphor were continued.

July 3d—10 o'clock A. M. Evident signs of mortification. Drs. Fisher and Corlis called at 3 o'clock P. M.; pulse 150, leg numb and cold. He died at 3 o'clock on the morning of the 4th, and the tumor was dissected twelve hours after by consent of friends.

Amputation at the first consultation might have saved this patient; but this is doubtful; had the wine been continued, with barks, and the tumor not opened, it is possible he might have survived a few days longer.

August 30th, 1845.

REVIEWS.

ART. VII.—*Vestiges of the Natural History of Creation.* Second edition, from the third London edition, greatly amended by the author; and an Introduction, by Rev. GEORGE B CHEEVER, D. D. New York: Wiley & Putnam. 1845. 12mo. pp. 280.

[CONCLUDED.]

In our last number, after a pretty full exposition of the doctrines of this singular work, we proceeded to state what to our minds is a fatal objection to its leading hypothesis; namely, that it is unsupported by facts. We see nothing in the living world that favors it, and unless we renounce observation, and all inductive reasoning, we must discard it as one of the fancies in which philosophers of the Monboddo, Darwin, and Lamarck school have loved to indulge. If it was by a transmutation of species that the world was peopled with its present inhabitants, how happens it that we see now no such changes going on among its countless tribes? Nature rebels against such innovations and admixtures. The horse and the ass leap her barriers once, as do some of the domestic fowls, the cock and guinea hen, and certain varieties of ducks, for example; but with a single cross, productiveness ceases; sterility is stamped upon their issue. And to the races more widely separated even this latitude is not allowed. It is not believed, by those who have examined the subject most carefully,* that the dog will cohabit with the

* See this Journal, vol. I, (new series) p. 514, for some very striking facts bearing on this subject.

fox or the wolf, closely as the species are allied; and mixed breeds of canine and feline animals, or of ruminants and pachyderms, no one expects to see, any more than the mermaids and minotaurs of ancient fable.

There is another objection, which is pressed by Dr. Cheever, in the introduction, with great effect, and which must occur on a little reflection to every mind. It is the incapacity of monkeys to rear human infants. The argument is conclusive; it needs but to be presented to carry conviction to every understanding not blinded by hopeless prejudice. No one will believe that helpless new-born babes could be nurtured on monkey-parents' knees, and it is strange that the absurdity of such a conclusion did not drive the ingenious author from a system which leads to it.

Should this doctrine of the progressive development of organic life prove, after mature investigation, to rest upon the sure basis of fact, there will be no alternative left but to embrace it, nor are we able to perceive any good reason why we should meet it with fixed hostility. If it be founded in nature, most surely we are safe in receiving it, for nothing is more true than the saying, that nature knows no useless or dangerous truth. If the fossilized remains of plants and animals do incontestably show a gradual development of living things, let us accredit them as the veritable handwriting of the Almighty, and rest satisfied that it was by such steps that he proceeded in the work of creation. But shall we also adopt the doctrine of spontaneous generation, and conclude that the species have come one from another, beginning with polypi, and running "from harmony to harmony," as the poet has it, "the diapason closing full on man?" Not at all. Take it, that the lowest orders existed first, that to them succeed species a little higher in the scale of being, the present perfect races appearing last, and we have only an expression of the fact that in this order, for reasons unquestionably wise, although they may not be wholly apparent to us, they were spoken into being.

But do these medals of creation, as they have been happi-

ly styled, afford conclusive proof of such a law of development? They do not, in the judgment of some of the most learned men of the age who have given their minds to the question. Mr. Lyell, one of the first, if not the very first of living geologists, after a careful examination of the whole ground, has expressed his opinion that the doctrine "has but a slender foundation in fact." In matters of this sort authority must not be strained too far, but certainly the conviction of a man who has attentively considered all the facts in the case, is entitled to a good deal of weight. We will see what some of the facts are which are thought to militate against this doctrine.

We referred incidentally to one of these in the former part of this article, in which we mentioned the appearance of birds at so early a period as that of the new red sandstone. The epoch when they left their foot-prints in the sand-stone of the Connecticut, is more ancient than those of the European formations from which their most extraordinary extinct reptiles have been obtained, and we should hence be led to infer that birds were created before lizards, the law of development being reversed, and the higher appearing earlier than the lower. This anomaly is met by the advocates of the law of development by objecting, that these birds belonged to a very imperfect family of birds, destitute of wings, and with only a rudimentary sort of respiratory apparatus; in fact, hardly superior to reptiles, and as well adapted as they to the poor accommodations which mother earth afforded to her first inhabitants. If size could be urged as an argument for high organization, some of these extinct cassowaries might fairly lay claim to it, for the tracks to which we have referred prove that some of them had a stride of six feet. Their stature, judging from their stride, and the length of their feet, no less than nineteen inches, was nearly two-fold that of the African ostrich, and in their rambles along the margin of the early sea, from which this sand-stone was deposited, they appear to have been accompanied by more than twenty species of smaller birds. Who will undertake to

say that all of these were incapable of flight, having only rudiments of wings and lungs? But if they were fitted for flying, then they must have required an atmosphere constituted like the present, and this is opposed to the doctrine of progressive development.

The following facts are equally hostile to it, for which we are indebted to Mr. Lyell, who opposes the doctrine with a strong array of arguments. It is not only the remains of polypi, and of such humble races of animals, that we find in the early formations, but the bones and skeletons of fishes. Geologists have discovered these in the old red sand-stones, and even in some transition lime-stones; in other words, they have found vertebrated animals in the most ancient strata, concerning the fossils of which we are in possession of any accurate information.

When we come to the tertiary formations, in which the organic remains of quadrupeds abound, we find proofs enough of a succession of races, but no evidences of progressive development. In the Eocene, or oldest strata of that class, the remains of a great assemblage of mammiferous animals have been brought to light, all of the extinct species, but apparently of an organization as perfect as that of any of the existing races. In the Miocene beds, or those of a newer tertiary epoch, other forms have been discovered, for the most part also of lost species, and almost entirely distinct from the Eocene tribes, but in no respect an improvement upon them. And, in like manner, with the Pliocene, or later period, we have a change in fossils, but no development. In the succession of quadrupeds through these long ages we detect no signs of progress in organization—no indication that the fauna of the earliest period was less perfect, in form or function, than that which immediately preceded our own.

If we turn now to the vegetable kingdom we shall find that the facts are equally unfriendly to this hypothesis. Instead of a few of the simplest forms of vegetation, we come at once, in the rocks which retain the traces of plants, upon all the leading divisions of the vegetable kingdom. We dis-

cover not the slightest indication of a gradual advance from the cryptogamous, up to what are usually called the higher order of plants; but, on the contrary, among the first three or four hundred species brought to light, have been discovered some of the more fully developed forms, both of dicotyledons and monocotyledons.

We have said that the author of the Vestiges is a believer in spontaneous generation, and this doctrine, indeed, would seem to be necessary to his hypothesis of a progressive development. It may be that the use which he makes of this exploded fiction is one cause of the aversion with which so many regard his system. We say exploded, for if any notion in physiology can be regarded as obsolete, we think the idea of spontaneous generation ought to be. It has been so often driven from its ground, as the light of science has widened, that one wonders that it has not long since ceased to command the respect of scientific men. While insects and cryptogamous plants perpetuated the species by processes which had not been discovered, their generation was held to be spontaneous; but when, at length, it was ascertained that, in analogy with the superior orders, they propagated by eggs and seeds, the doctrine took refuge in the infusory animalcules. Driven finally by the microscope from this strong hold, the last hope of its advocates is in the insects brought to light by the galvanic experiments of Mr. Crosse. How long this frail shelter will give the semblance of protection to the doctrine remains to be seen, but, we are persuaded, not long.

We are a little too fast. Says the author of the Vestiges:

"When lime is laid down upon a piece of waste moss ground, and a crop of white clover for which no seeds were sown is the consequence, the common explanation is, that the seeds have been dormant there for an unknown time, and were stimulated into germination when the lime produced the appropriate circumstances. How is it possible to be satisfied with this hypothesis, when we know (as in an authentic case under my notice) that the spot is many miles from where clover is cultivated, and there is nothing for six feet below

but peat moss, clover seeds being, moreover, known to be too heavy to be transported, as many other seeds are, by the winds?"

We read, a short time since, a similar case, and of unquestionable authenticity, in an agricultural paper. In making an excavation for a road, or for some such purpose, a quantity of the clay from the side of a hill was spread over the ground a little way off, and the next season this newly-made soil was covered with white clover. The circumstance was thought remarkable as the earth was taken from a considerable depth; but some one, curious in the matter, solved the enigma by finding, on a close examination, an abundance of clover-seed in the hill from which the clay was taken.

Another authentic case occurred in this city a few weeks ago. From an isolated pond in the neighborhood some boys brought us a muscle with which we were unacquainted. We showed it to our friend, Mr. Beadle, who has a familiar acquaintance with the shells of the Ohio, and for a time he was at a loss what name to assign it; but at last he decided that it was the *Unio obesus*, a species which up to that time had not been found in this locality. The pond on further exploration proved to abound in this species, and in it alone. How came they there? The explanation of those who hold to the doctrine of invariable generation, of course, would be, that either the muscles or their eggs, at some former time, were transported thither. "But how," would retort our author, "is it possible to be satisfied with this hypothesis," seeing that the spot is many miles from where this species has been found in the river? Well, since we discovered this Unio in its secluded home, Dr. Shumard has met with it in the Bear-grass, a mile or two distant; and now, whether its transportation to this pond by some of the many agencies that offer in such cases, or its generation there be the more probable hypothesis, is a question we cheerfully submit to the good sense of the reader. The animal proves to be the U. Sayi.

We have not the leisure, and perhaps our readers think

could not well afford the space, to discuss this question at greater length, and with a remark or two more, we shall therefore bring this notice to a close. Since beginning our article we have learned that several spirited and able reviews of the Vestiges have appeared, in which the speculations of the author are keenly criticised, and as the respectability of the sources from which these notices emanate will secure them a full share of public attention, we deem it of the less consequence to push our objections further. We are glad to find that journals of so much influence as the Edinburgh, and the North American Review, have taken the work in hand, and that the antidote is thus likely to circulate as extensively as the poison.

Having indulged our strictures so freely on the doctrines of this work, we may be permitted to say, in conclusion, that it is not so bad a book as the preface of the American editor prepared us to find it. It does not teach atheism, but in a passage towards the close even affords what we conceive to be a strong argument for the Christian religion. The author had been dilating on the mental constitution of animals, and on the possession by man of faculties which connect him "with the things that are not of this world"—as veneration "prompting him to the worship of the Diety," and hope "to carry him on in thought beyond the bounds of time;" with reason, "to enable him to inquire into the character of the Great Father, and the relation of us, his humble creatures, towards him." The existence of faculties having a regard to such things he holds to be good evidence, "that such things exist." Mental science goes thus far in support of religion, but no farther, and for the rest, he adds, we must look to evidence of a different kind. That evidence it was not the design of his book to indicate or examine; but in favor of its existence he closes his volume with the following impressive thoughts:

"The history and constitution of the world have now been explained according to the best lights which an humble individual has found within the reach of his perceptive and reasonsoning faculties. We have seen a system in which all is

regularity and order, and all flows from and is obedient to a divine code of laws of unbending operation. We are to understand from what has been laid before us, that man, with his varied mental powers and impulses, is a natural problem, of which the elements can be taken cognizance of by science, and that all the secular destinies of our race, from generation to generation, are but evolutions from a primeval arrangement in the counsels of Diety. It does not, according to this view, appear necessary that God should exercise an immediately superintending power over the mundane economy; he might be pronounced to repose in silent contemplation of his works, unoffended by evil, pitiless of suffering, satisfied with one eternal round of such doings as we see exemplified upon earth, liable as these presumably are to a progress in an improving direction. But this view, however supported, being attended with these sequences, is certainly one which no large portion of mankind will ever embrace. It may be a view of truth, but there is a monitor within which denies that it is the whole truth. We intuitively shrink from it in its isolated sternness, and demand to know if there are not other truths which require to be associated with it before it can be received even in its most limited application.

"To such requirements of our nature, so that we are satisfied of their being purely intuitive, and so I consider the present to be—it is necessary that the philosopher give full attention, for they are as truly facts as any other which he ever has occasion to consider. Such instinctive apprehensions cannot be there for nothing, for no such thing is made in vain. Reasonings may appear to be against them, and for ages they may be destitute of that kind of proof which rigid seekers for truth demand. But how often has it happened that they have after all been shown and admitted as true! Forty years ago—to take an example—it was advanced by one philosopher, and approved by many, that population tends to advance more rapidly than the productive powers of the soil, so that many human beings must come into the world, only by an irreversible doom of nature to sink out of it again. The notion was repelled by mankind generally, as disrespectful to Providence, and suggesting a painful idea of the constitution of human nature. For years the objection was thought by the disciples of Mr. Malthus to be futile; but its validity is now pretty generally acknowledged by the men of highest intelligence. It is seen that the philosopher erred in his calculations, and was therefore wrong in his conclusions. The lowly and unpretending minds are allowed to

have been, albeit on no ratiocinative grounds, in the right. It was in considering such triumphs of unenlightened judgment, that Pascal gave forth his beautful saying, that the heart has its aphorisms as well as the understanding. Such impulses appear to be the fore-cast shadows of great truths, and, when they are clearly seen to spring from no superficial or evanescent feeling, are assuredly worthy of being taken into account in all questions to which they relate.

"So thinking, I would seek to add to the truths which have already been eliminated from facts ascertained in science, some others which claim a place on the strength of their being dictated by the universal feelings of man. Something in our nature—as it appears to me—tells us that the Author of the universe is nearer to us, is in a more familiar and paternal relation to us, than would seem to be implied by a theory which represents him as only an author of laws. We cling to the idea that He continually watches over us, that we can come by rightly directed thought into communion with him, and that, when life's changeful scene is over, we shall, if found worthy, be received in a new form of being into his fatherly bosom. We feel, in our dependent state here below, a need for some ultra-mundane being, on whom to rest, as we would do upon the breast of a friend, and to whom to look as an ultimate refuge from the trying vicissitudes of life. We also feel how far short our best doings and designings are of that perfect goodness which our imagination can suppose—how deeply injurious and offensive must our ordinary life be to one so purely good. Something seems necessary to reconcile us to him, or to fit us for being restored to his society. Hence the idea of penitence and its wondrous potency—hence, in short, religion. Now these emotions are all so natural to man, they rise so readily in the civilized bosom, and meet so ready a reception in all neophytes who have not been perverted by baser feelings or grossly corrupt systems, that, if the principle which has been explained be a right one, they must point to truths. Admit that our reason cannot at present entirely justify them, we may expect that it will yet do so. They may be regarded (putting all other evidence aside) as truths in the dawning stage—suggested by the feelings—waiting only the final approbatory stamp of the understanding, and sure in time to receive it."

These emotions are met and satisfied by the Bible. In it is revealed that "system of mercy and grace" hinted at by

our author, which comes up to all the aspirations of the human heart. It teaches fully, what he finds it "necessary to suppose," namely, "that the present system is but a part of a whole, a stage of a Great Progress, and that the Redress is in reserve." We are most unwise, if, while listening to the teachings of nature, we live heedless of its warnings.

Note.—In reviewing what we have written in respect to spontaneous generation, it has occurred to us that we have used language a little more positive than the present state of our knowledge on the subject would authorise. As this is one of the errors of which we have accused the author of the Vestiges, we are anxious to avoid it, and to assert nothing as fact which is not fully authenticated. It, perhaps, cannot be said that the microscope has *settled the question*, as to the mode in which the infusory animalcules propagate their species; it may be that the ova of beings so diminutive as some of them are—less than the twelve-thousandth part of an inch in diamter—are too small to be detected by the most powerful instruments; but we cannot help believing that what has been revealed by the microscope is sufficient to show, that the generative act in them is in perfect analogy with that function in all the higher races of animals. That such is the opinion of Professor Owen, the highest authority on the subject, will be seen by the following extract from his Lectures:

"The act of of oviparous generation, that sending forth of countless ova through the fatal laceration or dissolution of the parent's body, is most commonly observed in the well-fed *Polygastria*, which crowd together as their little ocean evaporates; and thus each leaves, by the act of its life, the means of perpetuating and diffusing its species by thousands of fertile germs. When the once thickly tenanted pool is dried up, and its bottom converted into a layer of dust, these inconceivably minute ova will be raised with the dust by the first puff of wind, diffused through the atmosphere, and may there remain long suspended; forming perhaps their share of the particles which we see flickering in the sunbeam, ready

to fall into any collection of water, beaten down by every summer shower by the streams or pools which receive or may be formed by such showers, and by virtue of their tenacity of life, ready to develope themselves wherever they may find the requisite conditions for their existence.

"The possibility, or, rather, the high probability, that such is the design of the oviparous generation of the *Infusoria*, and such the common mode of the diffusion of their ova, renders the hypothesis of equivocal generation, which has been so frequently invoked to explain their origin in new-formed natural or artificial infusions, quite gratuitous. If organs of generation might, at first sight, seem superfluous in creatures propagating their kind by gemmation and spontaneous fission, equivocal generation is surely still less required to explain the origin of the beings so richly provided with the ordinary and recognized modes of propagation."

We have neither space nor leisure to pursue this subject, but an experiment which we find reported by Prof. Owen is of so conclusive a character that we make room for a notice of it. Prof. Shulze, of Berlin, filled a glass flask half full of distilled water, in which were various animal and vegetable substances; he then caused the water to boil violently, and while the vapor was escaping adapted bent tubes to the flask, one containing concentrated sulphuric acid, and the other a solution of potash, by means of which he could draw atmospherical air through the water, at the same time that all access to it, except through the corrosive fluids, was effectually cut off. The boiling heat, it was conjectured, would kill every living thing, and all germs in the flask, while the passage of the air through the acid and potash would be likely to have the same effect. For more than two months it was exposed to the influence of summer light and heat, the air being changed daily by suction through the tubes; during this time the experimenter watched with a microscope, but discovered in the water no "living animal or vegetable substance;" and when at length he separated the different parts of his apparatus not the slighest trace of "infusoria or confervæ, or of mould, could he find in the whole liquid; but all

three presented themselves in great abundance a few days after he had left the flask standing open." A vessel with boiled water placed near the apparatus and exposed to the air was found to contain infusoria in a day or two.

ART. VIII.—*The Principles and Practice of Dental Surgery.* By CHAPIN A. HARRIS, M.D., D.D.S., Professor of Practical Dentistry and Dental Pathology in the Baltimore College of Dental Surgery; Fellow of the American Society of Dental Surgeons; Member of the Medico-Chirurgical Faculty of Maryland, &c., &c. Second edition: revised, modified, and greatly enlarged. Illustrated by sixty-nine wood engravings. Philadelphia: Lindsay & Blakiston. 1845. 8vo. pp. 600.

This is a remarkably full treatise on the Teeth, and will doubtless become the manual of all dental surgeons in this country. The author has bestowed a very uncommon amount of labor upon it, with a view to rendering it as complete as any work could be in the present state of the art. It would be difficult, we suspect, to find any subject of interest to the dental surgeon which has been overlooked by the author, and a glance at the table of contents is sufficient to show that the maladies and deformities of the teeth, with their appropriate remedies, constitute an extensive and varied class of topics. The physician in the country will be able to make a profitable use of this volume, for he is often called upon to discharge the functions of the dentist. Many of the subjects are of a character to engage the attention of all classes of practitioners. Take the following as an example:

"*The Effects of Mercury, Tobacco, and Snuff upon the Teeth and Gums.*—Much has been said and written on the effects of these articles upon the dental organism, but there still exists much error of opinion on the subject, and for this reason, I cannot pass it by in silence.

"*Effects of Mercury.*—Mercury does not, as many imagine, exert any direct action on the teeth; it is only by the effects that it sometimes produces on the gums and secretions of the mouth, that they are injured by its use. When it is given in sufficient quantities, and its use continued long enough to produce ptyalism, however slight, it becomes hurtful to the teeth, and just in proportion as it affects the juices of the mouth, is the corrosive properties of these fluids increased. Hence, it can be considered only as an indirect cause of caries.

"The relation which the teeth sustain to the maxillæ, however, is often very seriously affected, and sometimes entirely destroyed by the exhibition of this medicine. Its introduction into the system is generally followed by an increased action of the glands' absorbents, and in no part of the body is this more evident than in the gums. It sometimes occasions a very rapid loss of substance in these parts, so that the teeth, by the destruction of their sockets, are loosened, and, in a few months, caused to drop out. A few years ago an application was made to me for a set of artificial teeth and gums, by an interesting young lady, of only twenty years of age, who had lost nearly the whole of her teeth, by the destruction of her gums and alveolar processes, caused by salivation. She informed me, that about four years before, she had been afflicted with a severe attack of bilious fever, and during its continuance, had taken a great deal of mercury, and, in consequence, had been so badly salivated, that her teeth were loosened, and soon after her recovery, one after another dropped out, in spite of the efforts of several physicians and dentists to preserve them, until only nine remained.

"The deposition of tartar upon the teeth, is much increased by the use of this medicine, especially when it affects the saliva. So much, in fact, is the tendency to a deposition of this substance, increased by its exhibition, that persons laboring, for the first time, under a mercurial diathesis, frequently have the crowns of their teeth, opposite the mouths of the salivary ducts, completely coated with it in a few days.

"In its administration, therefure, great care should be taken to prevent the injurious effects, that are liable to result from its use. Though, when given with proper precaution, it is perfectly safe in its action, yet, as a general rule, it should never be administered except by a person acquainted with the indications that it is expected to fulfil. It is not my purpose to discuss the merits of this article, but only to notice its effects upon the teeth, gums, &c.—yet at the same

time, I cannot forbear deprecating the profuse and careless manner in which it is but too frequently given by persons unacquainted with the curative indications of those diseases for which it is usually prescribed. Its remedial virtues in many diseases, have been amply tested, so that its claims to confidence, rest on no doubtful foundation, and the most eloquent panegyric, that could be pronounced in its praise, is found in the hundreds of lives that it every year rescues from an untimely and premature grave. Its powerful and valuable medicinal properties have gained for it a justly deserved and high reputation; yet the popularity which it has thus justly acquired, has given to its use a licence replete with mischief. The imprudent manner in which it is frequently administered, during infancy and childhood, while the permanent teeth are being formed, cannot be too strongly censured. A mercurial action in the system, at these early periods of life, exerts a most deleterious influence on the physical structure of these organs, whereby their future liability to decay is greatly increased.

"The symptoms indicating a mercurial diathesis of the general system, are, a slight swelling of the tongue; soreness and increased redness of its edges; soreness, tumefaction, and preternatural redness of the gums, with a tendency to bleed from the slightest injury; fetor of the breath; viscid saliva, accompanied by a more copious discharge than usual; thickening of the alveolar periosteum, and loosening of the teeth. Such are the diagnostics that may be regarded as the criteria of the specific or constitutional action of the medicine.

"When given without proper care, and for any considerable length of time, it sometimes gives rise to sloughing and ulceration of the gums, and to necrosis and exfoliation of the alveolar processes, and portions of the jaw. Cases of this kind are of frequent occurrence. Several have come under my own observation within the last ten or twelve years; for the particulars of one of which the reader is referred to that of Mr. M., page 165. Ulcers of the gums, arising from an excessive use of mercury, sometimes assume a very malignant character, and are exceedingly difficult to cure.

"Some are more susceptible to the action of mercurial medicines than others. A single dose will, in some instances, produce ptyalism, while in others, a half dozen may be taken within a few hours of each other, without, in the least, affecting the secretions of the mouth.

"The gums, after having been affected with mercury, are

ever after more susceptible to the action of irritants, and consequently more liable to become inflamed then they otherwise would have been. 'However perfectly,' says Mr. Bell, 'the effects of mercury may have subsided, even where no permanent injury appears to have been produced in the teeth, and where the common symptoms of its action have entirely ceased to exist, it is not at all an unfrequent circumstance, that after the lapse of a longer or shorter period, sometimes even several years, the teeth become loose, absorption of the gums and alveolar processes take place, and the early loss of the teeth is the consequence of an affection, the disappearance of which, for so long a time, had persuaded the patient that all danger of subsequent injury had ceased.'

"In conclusion, it is only necessary to observe, that, for the removal of the effects produced on the gums by the use of this medicine, a plan of treatment should adopted, similar to that previously recommended for spongy and inflamed gums. The offensive fetor of the breath may be corrected by frequently washing the mouth with diluted chloride of soda, or with the tinct. of myrrh.

"*Effects of Tobacco.*—In the supposed protective virtues of tobacco to the teeth, many find a ready excuse for its use. But its preservative qualities, if indeed it possesses any, have been greatly overrated. It is undoubtedly true, that, being a stimulant and narcotic, it will sometimes obtund the pain of an aching tooth; but even the relief thus obtained, is at best only temporary, and principally confined to those unaccustomed to its use; for those, who are in the daily habit of chewing or smoking, are as much subjected to toothache, as those who have never used it.

"As to the effects produced on the teeth themselves, by tobacco, I do not know that it matters much in what manner it is used, whether by chewing or smoking. Directly, it may be said to affect these organs, neither beneficially nor prejudicially. The increased flow of saliva which it occasions, may, perhaps, by diluting such vitiated humors, as happen to be in any of the interstices, or indentations of the teeth, and thus lessening their corrosive and acrid properties, render them less hurtful; yet this benefit is probably more than counterbalanced by its pernicious effects upon the gums. The constant state of excitement in which they are kept by its use, is apt, unless the greatest attention is paid to cleanliness of the teeth, to produce, especially in persons of a ca-

chectic habit, a sort of chronic inflammation, and, in those of a strumous temperament, debility.

"In treating of the effects of this herb, Dr. Fitch observes: 'I have noticed persons having good teeth, who had used tobacco, both smoking and chewing it, for a great number of years. On the other hand, I have seen persons with very bad teeth, who used tobacco. In some constitutions, it removes its irritability; in others it increases the irritability of the system. And when we look over the causes of caries, diseased gums, &c., we shall find that the fact respecting the operation of tobacco, which we have noticed, explains its good and bad effects on different individuals. There is an acrimony or impurity about some tobacco, which causes it to injure the teeth; but my observations, as to the effect of good tobacco, are, that by some individuals it may be chewed with impunity, and that smoking tobacco may be allowed.'

"This article, as Dr. F. remarks, differently effects the general health of different individuals. While some can use it with impunity, its effects upon others are such, that many, even after having used it for a number of years, have been compelled to relinquish it entirely. A person of strong constitutional health, full habit, and of sanguino-bilious temperament, may employ it moderately without injury, and, in some cases, with advantage; but to one oppositely constituted, it is more or less productive of hurtful consequences. It is not, however, my design to treat of the constitutional action of this weed, but only to notice its effects on the teeth.

"From the coloring matter contained in tobacco, the teeth of persons, who chew large quantities of it, become, if great care be not taken to keep them clean, in a few years, so much stained, that they present a most filthy and disgusting appearance. Moreover, their teeth usually suffer a more than ordinarily rapid loss of substance, especially when the front ones fall plumb upon each other, from the constant abrasion to which they are thus necessarily subjected.

"Having thus briefly noticed the consequences that are likely to result to the teeth, from the use of this article, when chewed and smoked, I shall proceed to offer a few remarks on the manner in which it affects these organs when employed as a dentifrice.

"*Effects of Snuff.*—Within the last few years, snuff has, in some parts of the country, become quite popular as a dentifrice, especially with females. The teeth suffer more from

the use of tobacco in this form, than in any other. Being reduced to a powder, its fine particles find a more easy lodgment beneath the edges of the gums, around the necks of the teeth, in their interstices, and various indentations and fissures, than when taken into the mouth in any other form. These particles not only thus serve as nuclei, around which the thickened and vitiated secretions of the mouth gather, but also, from their stimulating properties, and their long retention beneath the edges of the gums, and in the crevices of the teeth, are productive of much irritation, both to the gums and dental periosteum.

"I have observed, that the gums of persons, who have used snuff as a detifrice, for a length of time, usually have a dark purple, and sometimes a yellowish appearance, are soft and spongy, more or less isolated from the teeth, and that the teeth themselves are not unfrequently very much loosened. In fact, I do not recollect ever to have known an instance of an individual who had used tobacco in this way, two or three times a day, for several years, without the teeth and gums being thus affected. In some cases, however, it is much longer in producing these deleterious effects, than in others. Much depends upon the condition of the gums, at the time its use is commenced. If they be healthy, and firmly adhere to necks of the teeth, it may be employed for a considerable time, without being attended with any very obvious injury; but if they be at all diseased, a deleterious effect will soon become manifest. Viewing the subject in this light, and believing the opinion that I have here advanced, to be supported by the observation of every one, whose attention has been at all directed to the subject, I cannot but condemn the use of this article as a dentifrice; and recommend to every dentist, to particularly caution persons consulting him, and especially females, against thus employing an article teat is productive of such pernicious consequences to the teeth.

"Nor are its effects upon the general health less injurious. Persons who use snuff in this manner, are generally observed to have a pale, sallow countenance, especially if their constitutional health be at all delicate."

This extract affords a fair specimen of the style in which Dr. Harris has executed the several parts of his elaborate treatise. We take great pleasure in recommending it as a work of very high merit.

SELECTIONS

FROM

AMERICAN AND FOREIGN JOURNALS.

Case of Traumatic Tetanus successfully treated by large quantities of Wine and Brandy, with other means. By James William Ilott, Esq., of Bromley, Kent. Communicated by James Arthur Wilson, M.D., Physician to St. George's Hospital.

The patient, a robust man, aged 30, was thrown from his chaise, Nov. 28, and met with a compound fracture of the tibia and fibula, with considerable injury to the soft parts. By extension, the bones were placed in a good position, and it was determined to save the limb. The patient went on remarkably well until the 12th of December, when tetanic spasms first commenced. Healthy granulations had formed, and were covering the denuded bone. The spasmodic action affected the muscles for a time, and then gave way, the muscles of the jaw being those chiefly affected. On the 14th he complained of cramp and spasm in the chest. A blister was applied, and calomel and cathartic medicine administered.—15th. The pain and spasm of the chest were somewhat relieved, but he was very weak. He was ordered brandy-and-water and medicine with ether, every two or three hours, after which he somewhat rallied. He continued much the same to the 18th, when the tetanic symptoms were much increased in severity, and in the evening there was opisthotonos. Mr. John Scott saw him, agreed in the propriety of continuing the stimulants, and suggested opiate enemata, and turpentine and castor oil internally. This treatment was pursued, with little variation, till the 21st, when he was observed to be extremely low, with a pulse about forty, and in a cold

clammy perspiration. The quantity of brandy at this time administered amounted to rather more than three pints in the twenty-four hours; every part of the muscular system seemed affected with spasm.—Dec. 22nd. He was much the same, but the wound was looking more healthy. Dr. Wilson saw him, and urged the continuance of the stimulants, but recommended the entire discontinuance of opiates. He also recommended a suppository, composed of quinine, sesquicarbonate of ammonia, and camphor, to be administered every three or four hours. From this period he continued to improve, and on the 26th all tetanic symptoms had disappeared. During the eight days in which the disease was at its height, the patient took two gallons of brandy, besides wine, beef-tea, jelly, &c. Jan. 29th. The wound was nearly healed, and he was daily gaining strength. In a supplement to this communication, Dr. Wilson remarks that the case affords a well-marked instance of traumatic fever, and that the principle on which it was treated was one of unremitting stimulus and support, opium and all other narcotics being entirely laid aside on the tenth day of the attack. The extent and severity of the constitutional disorder were strongly indicated by the indifference of the patient to all the ordinary effects of the alcoholic stimulus. From this case he draws the important pathological inference, that tetanus, like fever, is a disorder of the entire system. Determined especially to the muscles, it is continually operative in the other structures, as in the universal blood. Generated after a definite period of incubation, it requires time for its development—time for its cure. On these views and indications, that treatment which assumes to be rational must address itself to the general business of nutrition rather than to the partial agencies of the nerves. Under the great systematic error of our modern pathology, tetanus is encountered almost exclusively by opium and other narcotic poisons. There is no plausible theory to account for the preference of these fatal drugs. By experience they have long been utterly condemned.—[*London Lancet.*

Treatment of Neuralgia by Tobacco. By Mr. John Chippendale, London.—[In a former part of the Lancet from which we take the following extract, Mr. Chippendale suggests the use of tobacco in neuralgia; since then he has tried it successfully in two cases. Finding the infusion an inconvenient form for frictions, he ordered an extract to be made as follows:]

Take of the best shag tobacco, four ounces; distilled water,

two pints; boil, and let them simmer for two or three hours, and strain; then wash the tobacco in two pints more of boiling distilled water, strain, and add it to the former liquor, and evaporate it to an extract. This operation was intrusted to the hands of Messrs. Baron and Harvey, the manufacturing druggists of Giltspur-street, and produced about an ounce and a half of the extract, possessing this very great advantage, as far as might regard private practice, that it was free from the disgusting smell belonging to tobacco. One part of this extract was now mixed with seven parts of simple cerate, to form an ointmdnt, which, for private practice, might be rendered more elegant, as the pharmacopolists say, by the addi tion of a little neroly, which I choose, as being as little stimulating as any essential oil of whieh I have any knowledge. Here, then, we have a narcotic ointment; for if the stimulating properties of the tobacco reside in the oil, it is to be presumed that has been all expelled in the manipulation. This ointment has been used for inunctions, in the quantity of half a drachm in some cases of neuralgia, night and morning, in others at night only, and has been attended with perfect success. The apothecary at the Farringdon Dispensary being applied to by a man with a bad toothache, advised the extraction of a tooth, but the patient not consenting to this, had some of this unguentum nicotianæ given to him for frictions, as a placebo, I believe, but it cured his roothache. I have also tried it as a local application, in psoriasis, with good effect; but on this it is not now my object to dwell.

It seems strange that Mr. Chippendale should have met with such success, considering that the same remedy failed in Dr. Allnatt's hands. Can it have been that the preparations of the herb used by the latter were of a stimulating character, while Mr. C's was a narcotic? It is always pleasant to be able to reconcile theory with fact, nothing being less satisfactory than empirical practice. Mr. Chippendale would account for the action of his strong preparation of tobacco, thus:—tobacco, it is notorious, deadens sensation; the agent is applied, so to speak, to a nerve itself: the first effect must be to deaden sensation in this nerve. The nerve is supplied with smaller nerves, nervi nervorum, or nervi vasorum, which are instrumental in the nutrition of that nerve; when these are dulled, their functions become diminished, whereby the nerve becomes atrophied, and the pain which was produced by pressure ceases. True, the process of nutrition may be again set up, and the neuralgia reinduced, but it is probable,

that, by proper perseverance in the first instance, permanent atrophy might be produced.—[*Braithwaite's Retrospect.*

Average of cases of Consumption Cured.—M. Roudet states, that in the post-mortem examinations of forty-five subjects, between three and fifteen years old, he had observed the cure of consumption in twelve cases. In one hundred and sixteen individuals, aged between fifteen and seventy-six years, tubercles in the lung or bronchial glands had become innocuous in ninety-seven cases, and had wholly disappeared in sixty-one. In one hundred and ninety-seven autopsies promiscuously taken, he found ten instances in which, at least, one cavern completely cicatrized, existed in the lung; and in eight cases one or more cavities were found in different stages of cicatrization.—*Ibid.*

Extract of green Walnut Shells, in Chronic Congestion of the Tonsils. By Dr. Becker.—In the *Medicinishe Zeitung*, there is published, by Dr. Becker, a formula for a preparation, which he has employed successfuliy, in the case of a boy afflicted with congestion of the tonsils. The tumefaction had taken place many years previously, and was then so extensive, that speaking had become very difficult, and respiration often impossible during the night. Dr. Becker advised the following solution to be applied with a brush.—Extract of green walnut shells, 4 grammes; distilled waters, 60 grammes. To mix and dissolve according to art. This was so prompt in its effects, that the congestion of the tonsils had disappeared before the whole of the solution had been used.—*Journal de Medicine*, from *Lond. and Edin. Monthly Journal of Med. Science, March*, 1845.—*Ibid.*

Treatment of Infantile Gastric Fever. By Golding Bird, A.M., M.D.—The origin of gastric fever occurring among children is usually to be ascribed either to unhealthy ingesta or depraved secretions. The pulv. sodæ comp* of Guy's Parmacopœia, in doses of three to eight grains at night, and a full dose of the pulv. rhæi salin.† every morning for a week

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* Sodæ Carbonatis exsiccatæ 3v. Hydrargyri Chloridi 3i. Pulv. Cretæ compositi 3x. m.

†Rhæi radicis pulv. 3i. Potassæ Sulphatis 3ij. m.

or so, will in most cases be found very successful treatment. To the latter compound, so well known to the profession for its almost specific power in these affections, Dr. Fordyce accorded this elaborate praise—"Had I been more ambitious of dying a rich man, than of living an useful member of society, the powers of our anti-hectic powder in curing, as if by miracle, the hectic fever and the swelled bellies of children in this town would have remained a secret while I lived."—*Guy's Hospital Reports —Ibid.*

Urinary Deposits and Treatment. By Golding Bird, A.M., M.D.

Urine without any visible Deposit.—A piece of litmus paper should be immersed in the urine, which, if acid, will change the blue color of the paper to red. Should no change occur, a piece of reddened litmus paper must be dipped in, and if the secretion be alkaline, its blue color will be restored; but if no change occur, the urine is neutral. Some of the urine should then be gently heated in a polished metallic spoon over a candle, or, what is preferable, in a test-tube over a spirit-lamp, and if a white deposit occurs, albumen or earthy phosphates are present; the former if a drop of nitric acid does not re-dissolve the deposit, the latter if it does. If the urine be very highly colored, and undergoes no change by boiling, the coloring matters of bile, *blood*, or purpurine are present. To determine which, pour a thin layer of urine on the back of a white plate, and allow a few drops of nitric acid to fall in the centre; an immediate and rapidly ending play of colors, from green to red, will occur if bile, but no such change if purpurine alone exists. Should the highly-colored urine alter in color or transparency by heat, the presence of blood must be suspected.

If the addition of nitric acid to deep red urine, unaffected by heat, produces a brown deposit, an excess of uric acid exists. If the urine be pale, immerse the gravimeter, and if the specific gravity be below 1·012, an excess of water exists in the urine, but if above 1·025, the presence of sugar, or excess of urea is indicated. To determine which, place a few drops in a watch-glass, add an equal quantity of nitric acid, and allow the glass to float on some cold water; crystallization of nitrate of urea will occur in two or three minutes, if the latter exists in excess. Should this change not occur, the urine must be examined specially for sugar, which, it must be remember-

ed, may exist in small quantities, without raising the specific gravity of the fluid.

Should the urine be alkaline, add a drop of nitric acid; if a white deposit occurs, albumen is present; if brisk effervescence follows the addition of the acid, the urea has been converted into carbonate of ammonia.

Urine depositing a visible sediment.—If the deposit is flocculent, easily diffused on agitation, and scanty, not disappearing on the addition of nitric acid, it is chiefly made up of healthy mucus, epithelium, or in a woman, admixture of leucorrhœal discharge. If the deposit is ropy and apparently viscid, add a drop of nitric acid; if it wholly or partially dissolves, it is composed of phosphates, if but slightly affected, of mucus. If the deposit falls like a creamy layer to the bottom of the vessel, the supernatant urine being coagulable by heat, it consists of pus. If the deposit is white, it consists of urate of ammonia, phosphates, or cystine; the first disappears on heating the urine, the second on the addition of a drop of diluted nitric acid, whilst the third dissolves in ammonia, and the urine generally evolves an odor of sweet-briar. If the deposit be colored, it consists of red particles of blood, uric acid, or urate of ammonia, stained with purpurine. If the first, the urine becomes opake by heat; if the second, the deposit is in visible crystals; if the third, the deposit is amorphous, and dissolves on heating the fluid.

Oxalate of lime is often present diffused through urine, without forming a visible deposit; if this be suspected, a drop of the urine examined microscopically will detect the characteristic crystals. Much of the little time required for the investigation thus sketched out, may be saved by remembering the following facts:—

If the deposite be white, and the urine acid, it in the great majority of cases consists of urate of ammonia; but should it not disappear by heat, it is phosphatic. If a deposit be of any color inclining to yellow, drab, pink, or red, it is almost sure to be urate of ammonia, unless visibly crystalline, in which case it consists of uric acid.

The only apparatus and re-agents required for these investigations at the bed-side are—A gravimeter, made small enough to float in an ounce of fluid. Red and blue litmus paper. A test-tube and watch-glass. Nitric acid. All these are readily arranged in a little case, and can thus be always at the convenience of the practitioner. For the microscopic examination of the urine, a vertical instrument on a firm tri-

pod stand, and large ring-stage, provided with a good half-inch achromatic object-glass, is alone required.

The following table briefly points out the best mode for the analytical examination of saline deposits, either by chemical tests or the microscope. The latter mode of investigation is infinitely preferable to all others, both for accuracy and economy of time, but is of course not readily available in the sick-room.

A Table for discovering the nature of saline deposits by chemical re-agents.

1.	Deposit,	white - - - - -	2.
	——	colored - - - - -	5.
2.	——	dissolves by heat - -	Urate of ammonia.
	——	insoluble by heat - -	3.
3.	——	soluble in liquor ammoniæ	Cystine.
	——	insoluble in - - -	4.
4.	——	soluble in acetic acid -	Earthy phoshates.
	——	insoluble - - - -	Oxalate of lime.
5.	——	visibly crystalline - -	Uric acid.
	——	amorphous - - -	6.
6.	——	readily soluble by heat -	Urates.
	——	slowly dissolves by heat -	—— stained by purpurine.

Table for determining the nature of saline deposits by the microscope.

1.	Deposit,	white - - - - - -	2.
	——	colored - - - - -	5.
2.	——	an amorphous powder -	Insoluble by heat; Phosphate of lime. Soluble by heat; Urate of Am.
	——	in defined crystals - -	3.
3.	——	in prismatic crystals - -	Triple phosphate.
	——	in octohedral or tabular crystals	4.
4.	——	in octohedra - - - -	Oxalate of lime.
	——	in simple or compound tables	Cystine.
5.	——	in transparent crystals -	Uric acid.
	——	amorphous, or spherical masses	Urates ammonia or soda.

There is one error in these directions, pointed out by Dr. James Johnson, viz: where Dr. Bird says that "if the urine be very highly colored, and undergoes no change by boiling, the coloring matters of bile, *blood*, or purpurine are present;" for it is well known that both the color and transparency of bloody urine are changed by heat. Dr. Johnson also points out that the headings of these tables are not quite correct, as neither uric acid nor cystine can strictly be called "saline" substances. On the Medical Treatment of the different forms of Uric Acid Gravel, Dr. Bird observes, that

Discarding altogether the existence of any specific agent for a disease which is rather symptomatic of another affection than really idiopathic, the therapeutical agents may be briefly referred to the following heads.

1. *Attention to the function of the skin.*—The remarks already made on the effect of an arrest of perspiration furnishing a pabulum for the formation of a deposit, or by retaining in the circulation a substance capable of rendering uric acid insoluble, show the necessity of attending to this indication. I have repeatedly seen diaphoretics, warm clothing, the use of a flannel, and in winter, even a chamoise-leather waistcoat, with friction by means of a flesh-brush or hair-glove, repeatedly remove a deposit of uric acid gravel, and in more than one instance, where even an hereditary taint existed from gouty or calculous progenitors. My own experience induces me to regard the warm, or still better, the vapor bath, as the most valuable diaphoretic. The latter is readily employed in private practice by means of the very convenient and portable apparatus of M. Duval, which has for a long time superseded other forms of vapor bath at Guy's Hospital. Actual diaphoresis is by no means necessary in the treatment of all cases of uric gravel; friction to the skin, and, when persons are sufficiently robust, immersion in the cold bath, followed by rubbing the surface of the body with a dry and rough towel, until reaction is produced, is often of great service.

Restoring the tone of the organs of digestion.—By effecting this, a double object is attained; the perfection of the primary assimilation of the food by which the entrance of crude nitrogenised matter, capable of being converted into uric acid, into the blood is prevented, and the prevention of the generation of any acid, the product of unhealthy digestion, which might be absorbed by the lacteals, and act as a precipitant of uric acid. This part of the treatment of calculous affections must be modified by the peculiarities of the case, and indeed is identical with that of the different forms of dyspepsia. Careful attention to the bowels, avoiding excessive purging, the use of minute doses of mercury, as of a grain of pil. hydrargyri or hydrarg. cum creta, with thrice that quantity of ext. conii, administered two or three times a day, with moderate doses of the carbonate of potassa or soda in the mist. gentianæ comp., if constipation exists, or in inf. calumbæ, or what is far better, from its action on the skin, inf. serpentariæ, will often effect immense relief. Where gastrodynia, with or without pyrosis, exists, the use of a half

a grain of argenti nitras, or one of argenti oxydum, immediately before a meal, will often check alike the gastric and renal symptoms. But the most important element in the treatment is a rigid attention to the quality and quantity of the ingesta, taking the utmost care to select those articles of diet which the patient can best digest, it being of far greater importance, in the majority of cases, to regard this, than to choose articles of food according to their chemical composition. A too bulky meal of animal or vegetable food is injurious to persons laboring under calculous dyspepsia, for whilst the former supplies too much nitrogen, both will become sources of mischief by overloading the digestive functions, and preventing the chylopoietic viscera doing their duty. In protracted cases, however, much good is derived by actually cutting off part of the supply of nitrogen. In this way I have seen a copious deposit of uric acid gravel disappear, after other measures had failed to give relief.

Moderate muscular exertion, and a due amount of exercise is quite essential in the treatment of this disease; for not only do they call into play some very important functions, but often improve the general health. Besides this, when the stomach is imperfectly able to digest nitrogenised food, exercise will often aid its assimilation by making a call upon the chylopoietic organs for supply for the want of tissue it produces. Among the remedies which appear most successful when the food is not converted into healthy chyle, and an unhealthy state of the blood from the presence of imperfectly assimilated matters results, the preparations of iron deserve notice. I have repeatedly seen copious deposits of uric acid in persons of low power completely disappear *pari passu* with the cure of the pseudo-chlorotic symptoms present, by the use of this important drug. The best mode of administering it, is in combination with a vegetable acid, as the stomach bears it well in this form, and it is probably more likely to enter the circulation. From six to twelve grains of the ammonio-citrate, or ammonio-tartrate of iron taken thrice a day immediately after a meal in a glass of water, have been most successful. The solution of the sesqui-acetate of iron is also a very valuable preparation, but is often inconvenient to prescribe, in consequence of its not being of constant strength.

Dr. Bird then proceeds to notice remedies which act as solvents of uric acid: and successively passes under review alkalies and their carbonates, biborate and phosphate of soda, benzoic and cannamic acid.

As the alkaline urates are far more soluble than the free acid, the employment of soda and potass with their carbonates has been long used in the treatment of uric gravel. They moreover exert a beneficial effect in neutralizing any free acid in the primæ viæ, and thus preventing a precipitant of uric acid reaching the kidneys. The liquor potassæ may be employed in doses of half a drachm thrice a day: it is best taken about half an hour after a meal, and may be conveniently administered in a little bitter ale, which conceals much of its disagreeable flavor, or in any bland vehicle. The carbonate of potass and soda are, however, far more agreeable, and perhaps more efficient remedies—of these the bicarbonate of potass deserves the preference. It should be given thrice a day in doses of ℈j. or ʒss. I think it appears to act best when in a glass of warm water. To make it more agreeable, I generally order, what I am accustomed to term to my patients, the artificial Vichy water, made by stirring ʒss. of bicarbonate of potass and gr. v. citric acid into a tumbler of lukewarm warm. This mixture evolves enough carbonic acid to be 'sparkling,' and is generally taken with readiness.

A very convenient mode of impregnating the urine with an alkali is to administer the potass or soda in combination with a vegetable acid, especially with the acetic, citric, or tartaric. The mode in which these act is easily explained; when acetate, citrate, or tartrate of potass are ignited, the acid absorbs oxygen, and is converted into carbonic acid and water, part of the former uniting with the alkali. In a similar manner are the salts decomposed during the process of healthy digestion; a carbonate finds its way into the circulation, and reaching the kidneys, renders the urine alkaline. If, however, the digestive powers are impaired, the vegetable acid is only partly decomposed, and in some few persons it escapes the influence of digestion altogether. 114 grains of tartrate of potass, 106 of citrate, and 99 of the acetate, absorb respectively 40, 48, and 64 grains of oxygen, to be converted into carbonate of potass and water. These salts may be administered by directing the use of the common saline powders made with carbonates of potass or soda and the citric or tartaric acid, in effervescence. When not contra-indicated the use of strawberries, currants, and some other fruits containing alkaline citrates and malates, are capable of making the urine alkaline, and may be occasionally employed with advantage.

Some persons cannot bear the use of free or carbonated

alkalies without suffering severely in their general health, nor is their protracted use altogether without some ill effect. A flabby state of the muscles, and an emaciated condition of the system, is frequently produced by the persistent use of alkaline remedies. Their injudicious employment may, as Dr. Prout has suggested, produce the formation of oxalic acid. Uric acid is soluble in a solution of borax, the biborate of soda—more so, indeed, than in alkaline carbonates; and this salt may be taken for some time, at least by male patients, without producing any very injurious constitutional effects, and readily finds its way into the urine. On this account its administration has been suggested in cases of uric acid gravel, but it has not been much employed in this country. In women, this drug cannot be employed with impunity, as it certainly exerts a stimulant action on the uterus, and I have seen it in two instances produce abortion.

The remarkable solvent action of phosphate of soda on uric acid, to which Liebig has lately directed attention, inspires a hope that its administration might be of use in cases of calculous disease, by impregnating the urine with an active solvent. All that is required to insure this drug reaching the urine is to administer it in solution sufficiently diluted; ℈j. to ʒss. might be administered in any vehicle, as in broth or gruel, as when diluted, the phosphate tastes like common salt, and few persons object to its flavor. I have administered this drug in two very chronic cases of uric acid gravel, and in one with the effect of rapidly causing a disappearance of the deposit. This occurred in the person of a lady about forty years of age, who had, at my wish, for some weeks used the artificial Vichy water of the German Spa at Brighton without relief. The triple salt, ammonia-phosphate of soda, would perhaps be a more active remedy than the simple phosphate, but its disagreeable flavor constitutes one objection to its employment.

Much attention has been lately drawn to the effects of benzoic acid in preventing the formation of uric acid, by the observations of Mr. Alexander Ure. When this acid or its salts are administered, they are acted upon by the stomach in a very different manner from the other vegetable acids. Instead of becoming oxidized, and being converted into carbonic acid, it combines with those nitrogenised elements which would otherwise have formed urea or uric acid, and is converted into hippuric acid. It has been stated that the quantity of uric acid falls, when the benzoic acid is administered, below the average quantity, or even disappears from

the urine. This has been, however, shown by Dr. Garrod, to be an error, and that urea alone disappears. Be this as it may, it is certain that the acid does appropriate to itself some body rich in nitrogen to form hippuric acid; and experience has shown that, in cases where an excess of uric acid is secreted, the admistration of this drug appears to limit it to about the normal quantity.

Directions for detecting the existence of the oxalate of lime deposits.—To examine urine for the purpose of detecting the existence of the salt under consideration, allow a portion passed a few hours after a meal to repose in a glass vessel. Decant the upper 6-7ths of the urine, pour a portion of the remainder into a watch-glass, and gently warm it over a lamp; in a few seconds the heat will have rendered the fluid specifically lighter, and induced the deposition of the crystal of oxalate, if any were present; this may be hastened by gently moving the glass, so as to give the fluid a rotary motion, which will collect the oxalate at the bottom of the capsule. The application of warmth serves, also, to remove the obscurity arising from the presence of urate of ammonia, which is readily dissolved by exposing urine containing it, to a gentle heat. Having allowed the urine to repose for a minute or two, remove the greater portion of the fluid with a pipette, and replace it by distilled water. A white powder, often of a glistening appearance, will now become visible, and this, under a low magnifying power, as by placing the capsule under a microscope furnished with a half inch object-glass, will be found to consist of crystals of oxalate of lime in beautifully formed transparent octohedra, with sharply defined edges and angles.

The crystals of the oxalate, when collected in the manner above directed in a watch-glass, are unaltered by boiling either in acetic acid or solution of potass. In nitric acid they readily dissolve without effervescence. The solution may be very readily watched under the microscope. When the oxalate is allowed to dry on a plate of glass, and then examined, each crystal presents a very curious appearance, resembling two concentric cubes, with their angles and sides opposed, the inner transparent, and the outer black, so that each resembles a translucent cube set in a black frame. This is best observed under a half inch object-glass; as with a higher power this appearance is lost.

In a very few cases the oxalate is met with in very remarkable crystals, shaped like dumb-bells, or rather like two kidneys with their concavities opposed, and sometimes so

closely approximating as to appear circular, the surfaces being finely striated. These crystals are produced, in all probability, by a prolific arrangement of minute acicular crystals.

On the Treatment of Oxaluria.—The treatment, in the majority of cases, is very successful; a few only resisting all the plans which were adopted. As a general rule, the functions of the body, where obviously imperfect, should be corrected, the general health attended to by the removal of all unnaturally exciting or depressing influences, the skin should be protected from sudden alterations of temperature by a flannel or woolen covering, and the diet carefully regulated. This has generally consisted of well cooked, digestible food, obtained in about equal proportions from the animal and vegetable kingdom; all things which tend to produce flatulence being carefully avoided. The drink should consist of water or some bland fluid, beer and wine being excluded, especially the former, unless the patient's depression render such positively necessary. A very small quantity of brandy in a glass of water has generally appeared to be the most congenial beverage at the meals. The administration of nitric acid, as suggested by Dr. Prout; or, what appeared to be preferable, the nitro-hydrochloric acid, in small doses, in some bitter infusion, or laxative mixture, as the mistura gentianæ comp., was, with minute doses of mercury, generally successful, if continued a sufficient length of time. In cases where these failed, active tonics, especially the sulphate of zinc, and where the patient was emaciated or chlorotic, the salts of iron in very large doses, appeared to be of great use, by subduing the irritable state of the nervous system. The shower bath by acting in a similar manner, has been also of great service. There is one remedy which appears to exercise a marked influence over the characters of the urine, and which, from the small amount of experience I have had with it, seems to hold out the probability of its great utility in the disease under consideration: I allude to the colchicum, which, it is now generally admitted, exerts an immense influence over the organic system of nerves, and the functions under its control. The character of the urine is remarkably influenced by this drug, an excess of uric acid generally being present during its administration; and in two cases in which oxalate of lime existed in abundance before its employment, uric acid appeared after a few days as a deposit, and nearly entirely replaced the oxalate; a circumstance generally observed during the successful treatment of this disease by other remedies. In

no case have I seen the disease suddenly yield; it has generally slowly disappeared *pari passu* with the decrease in number and size of the crystals of the oxalate.

On the Pathological Indications of Phosphates.—The occurrence of deposits of the earthy phosphates in the urine, must be regarded as of serious importance, always indicating the existence of important functional, and too frequently, even of organic mischief. One general law appears to govern the pathological development of these deposits, viz., that they always exist simultaneously with a depressed state of nervous energy, often general, rarely more local, in its seat Of the former, the result of wear and tear of body and mind in old people, and of the latter, effects of local injury to the spine, will serve as examples. It is true, that in the majority of these cases there is much irritability present, there is often an excited pulse, a tongue white on the surface, and red at the margin and tip, with a dry, often imperspirable, occasionally hot skin. Still it is irritability with depression, a kind of erythism of the nervous system, if the expression be permitted, like that observed after considerable losses of blood.

Dr. B. recognizes at least four different pathological conditions connected with deposits of earthy phosphates.

1. Cases in which dyspepsia, with some febrile and nervous irritation, exists, independently of any evidence of antecedent injury to the spine.

2. Cases characterised by high nervous irritability, with a varying amount of marasmus, following a blow or other violence inflicted on the spine, but without paralysis.

3. Cases in which the phosphatic urine co-exists with paraplegia, the results of spinal lesion.

4. Cases of diseased mucous membrane of the bladder.

The treatment of the first class of cases must be rather directed by general principles than limited to the solution of the phosphatic deposits.

It is true that by the persistent administration of acids the deposits may disappear for a time, but the ailment goes on; all that is effected by such treatment is to mask a symptom, and an important one, of the progress of the malady. After having attended to the morale of the case, as far as possible rousing the patient from any morbid influence excited in his mind, whether real or imaginary, the next thing is to attend to the general health. The bowels should be freed from any unhealthy accumulation by a mild mercurial laxative, as a few grains of pil. hydrarg., followed by a dose of rhubarb or

castor oil; but all active purging should be avoided, as it generally aggravates the distress of the patient, and decidedly interferes with the success of the treatment. A combination of a tonic laxative with a sedative may then be administered, as tinct. hyoscyami et sp. ammon. aromatici ää *m*xx—ʒss. ex mist. gentianæ co. ℥j. ter in die. If the bowels be irritable, the inf. cascarillæ, or inf. serpentariæ, may be substituted for the mist. gentianæ comp. Should gastrodynia exist, great relief will be obtained by the administration of half a grain of oxide of silver, made into a pill with confection of opium, before a meal. The diet should be very carefully regulated, all bland nutritious articles of food being preferred; vegetables should be avoided, and in general a small quantity of good sherry may be allowed. By a plan of treatment of this kind, the patients generally do well, and the phosphates and excess of urea vanish from the urine. As the patient approaches convalescence, much good is often effected by the use of the sulphate of zinc in gradually increasing doses, beginning with a grain thrice a day, made into a pill with a little ext. hyoscyami, or ext. gentianæ, and increasing the quantity every three or four days, until five grains or more are taken at a dose. Under the use of the zinc, I have seen many cases do well, whose symptoms approached in severity and character those of the mild delirium tremens. I need hardly say that change of scene and occupation are important adjuvants to our medical treatment.

The second class of cases are far less amenable to treatment.

In these, the phosphatic deposit is often copious, and sometimes consists nearly exclusively of phosphate of lime; the lumbar pain and weight are considerable, the skin often dry and scarcely perspirable; in some cases, indeed, I have seen it look as if varnished; the tongue sometimes white, is often red; the thirst often great; indeed, the general appearance of the case closely resembles one of diabetes. The urine is generally more copious than natural, frequently pale, and of a specific gravity below the average. On investigating the patient's history, some evidence of a previous strain or wrench of the back, or a blow over the spine, is always elicited. These patients are seldom hypochondriacal; but intense irritability of temper, and a painful, anxious expression of countenance and manner are almost inevitably present.

In the treatment of these cases, the great end and aim must be to subdue the morbidly irritable state of the brain and nervous system; and, subsequently, by a generous diet

and persistent use of those tonics which appear especially to exert their influence on the organic nerves, as silver, bismuth, zinc, &c., to endeavor to restore the assimilative functions to their due vigor. Besides the general indications to be fulfiled by regulated diet, amusements, exercise, &c., the use of narcotics, especially of opium, or the preparations of morphia, should be regarded as of the highest value; and we are indebted to Dr. Prout for first directing the attention of the profession to their use.

Cases occasionally appear in which the symptoms are of a much milder character, but which insidiously go on to the formation of a calculus. It is in these in particular that the use of acids is called for, to hold the phosphatic salts in solution, and prevent their being moulded into a concretion in the pelvis of the kidney. Unfortunately there is a great uncertainty attending their use; sometimes the mineral acids appear to reach the urine and destroy its alkaline character; often however, even their continued employment appears to be utterly ineffectual in rendering the urine acid. So far as I have watched cases of this kind, the nitric acid has appeared to produce the smallest amount of gastric derangement, and to render the urine acid, or at least diminish its alkaline reaction. In one case lately, in which the nitric acid could not be borne, the phosphoric appeared to succeed.

In the third class of cases, the deposition of the phosphates is a sure symptom of a grave and serious lesion, and must be treated according to the particular disease existing. The fourth class of cases, or "those in which the phosphates are probably entirely secreted with unhealthy mucus by a diseased lining membrane of the bladder," are familiar to every practitioner.

One point of great practical consequence must be borne in mind in forming a prognosis from the state of the urine, viz: not to regard it as ammoniacal, because the odor is offensive; and not to consider the deposit as purulent because it looks so. A piece of litmus paper will often show the urine to be really acid, and microscopic inspection often proves that the puriform appearance of the urine is owing to the abundance of phosphates with mucus. For want of these precautions I have seen one or two cases regarded as almost hopeless, which afterwards yielded to judicious treatment. It is quite certain that the mucous membrane of the bladder may, under the influence of chronic inflammation, secrete so much of the earthy phosphates and unhealthy mucus as to render the urine puriform and offensive without having necessarily un-

dergone any structural change. A few cases have occurred to me in practice, in which the kind of urine just referred to was secreted for a long time, and yet yielded readily to treatment. In these, the greatest good has arisen from freeing the bladder from the phosphates which appear almost to incrust it, by acid injections. In this way cases have occasionally yielded which have quite defied all other treatment.

In one case which Dr. Bird relates, great benefit was obtained by the daily careful injection of acid. hydrochlor. *m*x, with vin opii *m*xx. in barley water. With respect to the influence of diuretics, Dr. Bird lays down three 'general laws' which regulate the action of these remedies.

Law 1*st*. All therapeutical agents intended to reach the kidneys must either be in solution when administered, or capable of being dissolved in the fluids contained in the stomach or small intestines, after being swallowed.

Law 2*d*. Bodies intended to reach the kidneys must, to insure their absorption, have their solutions so diluted as to be of considerably lower density than either the liquor sanguinis, or serum of blood.

Law 3*d*. If a sufficient quantity of water cannot be received into the small intestines, or the circuit through the portal system in the vena-cava ascendens, or thence through the lungs and heart into the systemic circulation, be obstructed, or if there be extensive disorganization of the kidneys, the due secretions cannot be effected.

1. Whenever it is desirable to impregnate the urine with a salt, or to excite diuresis by saline combination, it must be exhibited in solution, so diluted as to contain less than five per cent. of the remedy, or not more than about twenty-five grains in an ordinary draught. The absorption of the drug into the capillaries will be insured by a copious draught of water, or any diluent, immediately after each dose.

2. When the urine contains purpurine, or other evidence of portal obstruction exist, the diuretics or other remedies employed should be preceded or accompanied by the administration of mild mercurials—taraxacum, hydrochlorate of ammonia, or other cholitic remedies. By these means, or by local depletion, the portal vessels will be unloaded, and a free passage obtained to the general circulation.

3. In cases of valvular obstructions existing in the heart and large vessels, it is next to useless to endeavor to excite diuretic action, or appeal to the kidneys by remedies

intended to be excreted by them. The best diuretics here will be found in whatever tends to diminish the congested state of the vascular system, and to moderate the action of the heart; as digitalis, colchicum, and other sedatives, with mild mercurials.—*Medico-Chirurgical Review, April*, 1845.—*Ibid.*

On certain Differences in the Composition of Blood in the Male and Female.—MM. Becquerel and Rodier read a very elaborate memoir 'On the Composition of the Blood in Health and in Disease,' before the Royal Academy of Sciences, in the course of last November. As it must always be of the first importance to determine the normal condition of any of the fluids of the body, before we attempt to ascertain its morbid alterations, their remarks on the relative constitution of the blood in healthy adults of the two sexes may be deemed acceptable. The proportions given in the following tables were determined by taking the average or medium figures obtained in a variety of experiments.

	Man.	*Woman.*
Water - - - - - -	779	791,1
Globules - - - - - -	141,1	17,2
Albumen - - - - - -	69,4	70,5
Fibrin - - - - - -	2,2	2.2
Extractive matters and free salts -	6,8	7,4
Fatty matters - - - - -	1,6	1,620
Seroline - - - - - -	0,020	0,020
Phosphorated fatty matters - -	0,488	0,464
Cholesterine - - - - -	0,088	0,090
Soap - - - - - -	0,004	0,046
In 100 hundred parts of calcined blood.		
Chloride of sodium - - - -	3,1	3,9
Soluble salts - - - - -	2,5	2,9
Phosphates - - - - -	0,334	0,354
Iron - - - - - -	0,565	0,541
Density of the defibrinated blood	1060,2	1057,5
Density of the serum - -	1028	1027,4

By comparing the two columns in this table, we find that certain very noticeable differences exist between the blood of the male and that of the female, in a state of health. The density of the defibrinated fluid is greater in the former, and

consequently contains a larger quantity of soluble matters; proportion of water too is decidedly less. The quantity of the colored globules is considerably greater in the blood of the male than in that of the female: this is perhaps the most important, and indeed it is the fundamental, difference in the blood of the two sexes. In the female, the *minimum* number was 113, the *maximum* was 137, and the *medium* 127; whereas in the case of the male, the *minimum* was 131, the *maximum* 151, and the *medium* 141.* The proportion of the fibrin, and also that of the albumen, was found to be very nearly the same in both sexes. The proportion of the iron present in the blood is always commensurate with that of the red globules.

MM. Becquerel and Rodier are of opinion that the function of *menstruation* exercises a marked influence on the proportion of the red globules in the blood of the female. In the girl, before this function has properly commenced, the relative quantity is below the normal standard; when the secretion is fairly established, it (the quantity) rises up to 127 or even higher; and this state of things continues until about the critical period of life, when menstruation ceases; then the proportion of the red globules falls considerably below this mark.

Pregnancy also has a very decided influence on the condition of the blood; the red globules and the albumen become diminished, and the fibrin, phosphorated fatty matter, and the water slightly increased.—*Med. Chir. Rev. from Ency. des Sci. Med.*

True and False Mesmerism.—Dr. Charles Radclyffe Hall, of London, in a series of Articles in the Lancet, on the Rise, Progress, and Mysteries of Mesmerism, in all ages and countries, deduces the following conclusions:

"Of the alleged results of mesmeric processes, I believe there are

Proved—Quietude; composure; sleep.

Probable, but requiring confirmation—Traction; muscular

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* This proportion is considerably higher than that (viz: 127) assumed by Andral and other hæmatological enquirers, as the standard of health; while the proportion of fibrin in our table is lower than that (3) in theirs.

rigidity; convulsions; heightened sensibility; diminished sensibility; double consciousness.

Possible, but not very probable—Insensibility to severe pain, for a given length of time, at pleasure.

Impossible, as far as anything can be so—Clairvoyance; intuition; prevision; community of thought; involuntary and complete subjection of mind to the mesmeriser.

And, lastly, I believe that we have not a shadow of evidence in support of the existence of any new agency, whether designated mesmeric, magnetic, occult, or by any other name."

Up to the present hour, we know of no Medical Journal, either in Europe or in this country, that looks upon mesmerism with the least allowance.—*Southern Medical and Surgical Journal.*

Paralysis of the arm relieved.—On the 12th of March last, we were called to see a negro boy about ten years of age, the property of Miss D., and found him laboring under complete paralysis of the right arm. The boy's mother gave us the following history:

Two nights previous to our visit, something like a noise caused her to notice the boy: she found him somewhat stupid, partially blind, and unable to move the right arm. He remained in this condition until our visit, about forty hours after.

The patient then presented the following symptoms:—Stupor, such as to render it difficult to arouse him; pulse firm and slow; bowels costive; complains only of pain in the head. We bled him generally and locally; blistered the nape of the neck; ordered mercurial and aloetic purges—his bowels were all the time very difficult to move. This treatment was pursued ten or twelve days, without any improvement. We than put him under the operation of the electro-galvanic battery, the operation of which was confided to his young master, to be made daily.

April 12. I happened to be in the neighborhood, and called to see the boy. I found him almost entirely relieved: he could throw a stone about as far as he ever could, and the only difficulty was a little weakness of the arm. The use of the battery was shortly after discontinued.

June 17. The arm has been gradually improving, and there is now scarcely any difference between it and the other.—*Ibid.*

State of the Blood, produced by Absorption of Urine.—This form of the disease is described by Autenrieth and Schonlein, under the title of *urodialysis*, and by ancient authors, under that of *ischuria*, or *paralysis vesicalis*, *urpolania*, &c. It has been established by recent researches, that urea and uric acid are formed in the blood in consequence of defective renal secretion, and that it can be excreted from the blood by other organs than the kidneys. Urea has been found in the perspiration, the fæces, and the matters discharged by vomiting; in the air expired from the lungs, in the saliva, the tears, the milk, and the fluid exhaled from the serous membranes, the secretion from ulcers, &c.; and this has commonly happened with patients who had suffered for sometime with retention of urine. Numerous cases show that these vicarious secretions permit of retention of the urine existing for days, and even weeks, without danger to life.

The urea, when introduced into the blood, seems to produce a morbid condition of the whole stream, and thus destruction to life. For it is proved, that urea enters very readily into combinations, even by mere change of temperature, and that it is particularly inclined to transformation into carbonate of ammonia, while the latter salt possesses the property of readily dissolving the fibrin of the blood. The symptoms, described by modern authors under the title of *urodialysis senum*, are thus different from those observed by the author; for, in the latter, there was no pronounced acidity, no ischuria urinosa, asthma urinosum, nor prurigo semilis, &c. But they were very similar with those described by Morgagni and Stoll.—*Med. Times.—Braithwait's Retrospect.*

How to Preserve Pills of Extract of Aloes.—Extract of aloes readily absorbs moisture from the atmosphere, which renders it difficult to preserve in the form of pills. This inconvenience may be perfectly avoided, according to M. Rottscher, by adding a fourth part of the carbonate of magnesia. *Lond. and Edin. Monthly Jour. of Med. Sci.—Ibid.*

Use of Arsenic in Ascites. By Dr. CORMACK.—This gentleman believes that when ascites depends upon hepatic or splenic congestion, much benefit will be obtained from the administration of small doses of arsenic. He recommends that the dose should not at first exceed the 16th or 20th part of a grain; that this should be taken in not less than four ounces of water, and with an empty stomach. The dose should be repeated four or six times—not seldomer—in 24 hours. In skin diseases, intermittent fevers, enlarged spleen from intermittent fever, and, indeed, in every case in which arsenic is known to have specific effects, Dr. C. recommends that it should be given in the method above mentioned, and advises that all other drugs should, if at all possible, be suspended during its administration. In old cases of enlarged spleen and liver, the cure will be hastened by the use of a succession of blisters.—*Lond. and Edin. Monthly Jour. of Med. Sci.—Ibid.*

Luxations.—At 17 years of age, being a student of medicine, I had read Cheselden's Anatomy, and was in the 13th vol. of Van Swieten's Commentaries on Boerhaave's Aphorisms, when the very respectable country physician with whom I studied was called to reduce a luxated jaw. The accident was novel to him, and making no pretentions to practical surgery, a messenger was dispatched for a surgeon some miles distant. In the interval, before the expected arrival of the surgeon, I found in our library, an ancient, odd volume on Chirurgery, which contained directions "how to set a jaw." "On this hint I spake," and having obtained permission to attempt the reduction, I succeeded. This incident of early life determined me to become a surgeon, and though nearly half a century has gone by, in which there are few operations in any department of surgery that I have not performed with measureable success, no one has ever afforded me the pleasure, the delight, the ecstacy, of this my first essay.

"Old Luxations," are to this day, the opprobria of surgery. Few surgeons, at this time, feel willing to undertake the reduction of a luxation that has existed 30 days.

A little girl 10 years old, suffered luxation of the hip joint forward into the foramen. The extent of the injury was not discovered until the fourth week after the accident, when a "faculty council" of physicians and surgeons was convened,

who gravely mooted the question, whether at this *late period!* it would be proper or safe to attempt reduction. A negative decision was so far overruled that some efforts were made to reduce it, and failing of success *at the time*, the case was abandoned. I am bound to confess that I was one of this bevy of abettors, and cannot think of the case now without deep feelings of regret and shame.

Miss ——, a young lady of 16 years, had luxation of the hip-joint, backward on the dorsum ilii. It was thought to be a severe contusion only, until the third week; the luxation was then reduced in the usual way, without the aid of machinery.

Mr. —— dislocated the elbow joint. The injury was mistaken for fracture of the humerus, and dressed with bandages and splints. At the end of four weeks he came to me. The head of the humerus was on the forearm, and the joint anchylosed. The reduction was effected in the following manner:

The body was firmly fixed; very powerful extension and rotation were made and continued, with but momentary intermission, a full hour, when reduction was accomplished. The suffering during the operation was severe indeed, and the subsequent symptoms alarming—rigors, faintings, and spasms, that yielded only after several hours of suffering and anxiety, to large and repeated doses of opium. This was an act of unnecessary cruelty which ought never to be repeated.

Luxations of the shoulder joint are the most common of luxations. Mr. R——, 22 years old, a stout and very muscular blacksmith, had luxation of the right shoulder joint into the axilla. The surgeon who dressed it assured him it was reduced. Seventy five days after the accident he came to me; the head of the humerus was firmly fixed deep in the axilla, pressing on the axillary plexus, and causing much pain, particularly in the fingers and hand. The reduction was undertaken in the following manner: the arm was moved gently and rotated from day to day, as he could bear it, and wider and wider, until the head of the bone was disengaged from its from its new attachments, when extension was added to rotation for several successive days, in all, I believe, eight or nine days, and when the muscles seemed to be sufficiently wearied, the head of the bone was brought up to its place by a powerful effort. The glenoid cavity was obliterated and the restoration of the bone "gave no sign."

The two following cases are of recent occurrence. An

Irish ditcher came to me, and this is the history he gave of himself. Four months before, in excavating a sand bank, a body of earth fell on him and dislocated his shoulder into the axilla. Dr. H., a respectable surgeon, was immediately called, and reduced the luxation without difficulty. The fourth day after the accident he went to his work, and had continued to labor since, without suffering inconvenience. On exposing his shoulder I did not hesitate, at sight, to pronounce it a luxation into the axilla. The acromion process was unusually prominent, and it needed not to be touched, I thought, to decide the nature of the injury. Of course I could not fail to feel great surprise, for I knew Dr. H. personally, and it seemed incredible that *he* should have left the shoulder in that condition; nor was my surprise abated by the fact that the patient had suffered so little from the accident, and had such full, free, and unconstrained motion of the arm. Upon examination by taction, it turned out to be, not a luxation of the shoulder, but what I had not before seen, a luxation of the humeral end of the clavicle. It was, however, still a matter of amazement that Dr. H. took no measures to lessen the deformity. It happened singularly enough, that at this moment, while the patient was with me, I saw Dr. H. passing, and called him in to witness his own "handy work." The doctor looked and expressed more real, unfeigned astonishment than I felt. The condition of the joint did not admit of a doubt; but he solemnly assured me that the luxation of the clavicle did not exist when he last saw the joint. The solution is ready enough; the right shoulder was luxated, and the patient resumed his work with the spade the fourth day after the accident; the consequence was consecutive luxation of the clavicle. Except the deformity, the patient suffers nothing from the accident.

W——, a drunken Irish mendicant, 56 years old, dislocated his shoulder into the axilla. A coterie of surgeons attempted the reduction some days after the accident, and used for that purpose, what I suppose, from representation, to have been the "screw of Hippocrates." About nine weeks after the accident, reduction was undertaken by my advice in the way, substantially, described in the case of Mr. R. The head of the humerus could be felt deep in the axilla, pressing painfully on the axillary plexus. Motion, extension, and rotation, were made as they could be borne, at short intervals, for a fortnight. By these means the head of the bone was brought out of the axilla, and could be felt on rotating the arm, grating on the inferior edge of the glenoid. In this po-

sition it was confidently hoped that reduction might be completely effected by a well directed and powerful effort. It was made in the following manner: the patient was laid upon the floor on his back; extension was made as before described; in addition another assistant was seated by the side of the patient, holding with both hands a firm belt passed over the luxated shoulder, and his heel in the axilla. When extension was carried to its utmost verge, the arm was rotated, and this assistant directed at the same time to draw on the belt, and force up the head of the bone with his heel. The effort did not succeed, and it was decided to wait another trial. The axillary glands, however, took on painful inflammation, which precluded all further attempts for a time, and the patient declaring himself satisfied with the relief he had obtained, could not be persuaded to submit to another trial. The deformity was comparatively slight, and no doubt was entertained that for usefulness, the arm would be ultimately well restored. The last attempt at reduction was made about the first of July ultimo. On the 3d August, this miserable man, who had been in a state of daily inebriation for several weeks, fell in the street and instantly expired. Five hours after death the shoulder was examined. An incision was made from the neck over the acromion process, and down the arm below the insertion of the deltoid muscle. In laying off the integuments the attachments of the deltoid and pectoral muscles were severed, and the capsular ligament fairly exposed. In this stage of the examination attempts were made to raise the bone to its place, but they were unsuccessful. The capsule was next divided laterally, laying open the glenoid and showing the head of the humerus resting against the inferior edge. The glenoid was filled with cartilaginous deposit in which were detected some spiculæ of bone. An attempt was now again made to bring up the head of the bone, but it resisted our efforts. Lastly the attachment of what I took to be the sub-scapularis muscle was divided, and the bone was readily brought to its place.

In my life, which has not been a brief one, and with a practice not very limited, I have never failed to reduce a recent luxation of the shoulder joint. My position and relations have been such that I have often been referred to by my less fortunate professional friends, and with equal success; nor do I recollect any serious ill-consequences to have followed the operation. I owe this, no doubt, to the manner of reduction, and I hope you will pardon my egotism and gar-

rulity, in formally describing it. To reduce a luxation of the shoulder joint, the surgeon will need four trusty assistants. If the luxation be into the axilla, seat the patient on the floor and fix the body by passing a broad belt or band around it under the dislocated arm, and brought over and held firmly by an assistant, on the processus acromion of the sound side. Wrap a damp napkin around the arm above the elbow and loop over it a suitable strap (or silk handkerchief) to be used for extension; an assistant grasps the arm above the elbow, passing his hand underneath it with one hand, while he takes the arm at the wrist in the other. Bending the arm to a right angle, he raises the elbow *above* a right angle and parallel with the body, *and as much above* as is consistent with the necessary extension, thus removing all resistance from the deltoid and supra spinatus muscles. Another assistant now inserts his hands into the loop of the strap or handkerchief, one on the outside, the other passed under the elbow on the inside. The fourth assistant stands behind "a corps de reserve." The surgeon, standing behind the patient, grasps the shoulder joint with both hands, thrusting the fingers of each deep into the axilla behind the head of the bone, with his thumb (if he can reach it) on the acromion process, directs extension to be made deliberately and forcibly, follows with his fingers the head of the bone as it emerges from the axilla, and when it approaches the inferior edge of the glenoid directs the supernumerary assistant to grasp the arm with both hands above the loop, and while *he* adds to the force of extension, the *first* assistant is directed to rotate the limb; the surgeon at the same time raises the head of the bone with his fingers, and it slides into its place with a loud report. If the luxation be forward, under the pectoral muscle, the arm should be inclined backward in making extension; if it be backward on the scapula, which I have seen but twice (in the same individual) the arm should be inclined forward. I use no machinery. Years ago I was prompted to use the "pullies," but I found them sadly in my way and put them aside.—*Buffalo Medical Journal.*

Case of Continued Priapism.—In the Western Journal of Medical and Physical Sciences a case was reported, about ten years since, similar to the following, from the London Lancet, except that the termination was in death.

R. W——, aged 26 years, a seaman, of stout make and florid complexion, stated that he arrived from Calcutta about the 12th of April, 1844, and had lodged with a female ever since. On Friday night, the 26th of the same month, he experienced an unusually fierce desire, with intense erection of the penis, which latter lasted throughout the night, with but little mitigation, being attended with pain of the left side of the organ, near the bulb, and an inclination of it towards the same side. These symptoms continuing, although congress was frequently resorted to, induced him to send for medical aid about 2 P.M. of the following day, when I found him in the condition above described.

On examination, the corpus spongiosum was found moderately turgid, especially the gland, which was situated near to the anterior superior spinous process of the ilium, and almost touching the abdominal parietes; the corpora cavernosa were fully distended and firm, scarcely yielding to pressure, and without any perceptible difference, either in color or firmness, at the part from which the inclination towards the left side commenced. When its restoration towards the median line was attempted, the pain was much increased. Beyond these he did not experience any uneasy sensation, nor was his health in any way deranged, the skin being rather moist, the tongue clean and moist, the pulse 75, full and soft, and the bowels open.

Let a cold lotion be applied, and let him take a quarter of a grain of tartar emetic, with one grain of powdered opium, every fourth hour; and three grains of calomel, with six of compound extract of colocynth, immediately.

April 28. Slightly improved, the pain and inclination towards the left side being lessened, and also the distention of the corpus spongiosum. Repeat the medicines. Nine P.M. The pain is slightly increased. Let six leeches be applied to the part.

29th. Decidedly better. The pain is much alleviated, and the corpora cavernosa rather flaccid. The organ has assumed the median line, and forms nearly a right angle with the abdomen. Repeat all the medicines.

30th. Much worse. The condition of the parts resembles that first described with the exception of the inclination to the left. On close questioning, he acknowledged having had frequent coitions since the 26th, and with the usual results, so that I advised his removal to the London Hospital. The report during the time he remained in the hospital was furnished by the senior dresser:—

R. W——, admitted for priapism, under the care of Mr. Luke, on the 30th of April, 1844. The corpora cavernosa are very much distended, but not the corpus spongiosum, or glans; the left crus of the penis is very firm.

Let him be bled to sixteen ounces, and twenty leeches be applied to the perineum. Apply a lotion of spirit in lime water, and give one scruple of calomel and rhubarb.

The pain was relieved by these means, but the tension of the parts was not at all diminished.

May 1st. About the same.

Let him have some house medicine, and saline antimonial mixture three times a day.

2d. Not at all relieved, the disease being as intense as ever.

Let him have two grains of calomel every third hour.

5th. The mercury has produced salivation, therefore, it is discontinued; the organ is not so tense; the angle which it it forms with the abdomen approaching nearer to a right angle.

10th. Left the hospital of his own accord; in fact much against the wishes of Mr. Luke. The penis is more flaccid, and forms a right, instead of an acute angle, with the pubis.

After leaving the hospital, he returned to his former abode, having free intercourse with the same female, until he left England for Sidney. During this time he had erections, and complete communication; the former proceeding to the usual extent, and afterwards gradually subsiding to the state in which the organ was previously to the venereal organism.

On leaving England (May 18th), his condition was as follows: Corpus spongiosum flaccid; corpora cavernosa moderately tense, and forming only an angle of about 45° with the pubis.

By letter, dated September, the condition last described remained without alteration for more than three months after he left England, but after that became rapidly palliated, and is now quite removed. On his return home he was perfectly cured, and without any ill results from his accident.

The remarks required by a case of this kind are but few. The lesion appears to have been caused by effusion of blood into the cells of the corpora cavernosa, which remained in a semi-fluid condition. The time (four months) during which it continued is very remarkable, whilst the perfect recovery of the patient eventually, seems to show that any instrumental mode of cure should not be attempted, unless undoubted signs of gangrene appear.

In a case treated by Mr. Calloway, and published in the *Medical Repository* for April, 1824, venesection, leeching, the warm bath, tobacco enemas, tartar emetic, and nitre, were exhibited and camphorated mercurial ointment was rubbed into the part, but without any benefit; wherefore, on the sixteenth day after the erection occurred, the left crus of the penis was punctured with a lancet, and a large quantity of dark grumous blood let out. By pressing the part, both corpora cavernosa were emptied through the aperture, which was followed for a few days by the escape both of pus and blood. The patient recovered, but never gained his power of erection, and therefore remained impotent for the remainder of his life, forming a marked contrast to the success of the foregoing case. In Mr. C.'s case, it occurred during, and was not diminished by repeated connexion.

Clinical Lectures on Medicine, delivered at the Meath Hospital, Dublin. By Robert J. Graves, M.D., M.R.I.A., &c.

Let me now direct your attention to the case of Margaret Lauder, who was admitted a few days ago, for suppression of the catamenia, with obstinate vomiting and persistent gastrodynia. This woman, who is of slender make and rather delicate constitution, has been complaining, more or less, for the last four years, during the greater part of which she has been subject to pain in the stomach, nausea, and vomiting. About five months ago, a new feature was added to her disease; the catamenia became suppressed, and have not appeared since. The attack of vomiting comes on every third or fourth day, sometimes oftener, and is preceded by pain in the region of the stomach, darting across the epigastrium and towards the left shoulder. The fluid ejected from the stomach, which is extremely sour, and as she states, "sets her teeth on edge," is of various colors: green, yellow, gray, or whitish, but never black. There is no remarkable epigastric tenderness, and she finds that during a paroxysm, the violence of the pain is diminished by pressure.

The first question that suggests itself with respect to the nature of this case is, does this long-continued, obstinate, frequently recurring pain of the stomach, nausea, and vomiting, depend on organic disease, or is it the result of mere functional derangement? This is a most important question.

and one which you will frequently have occasion to put to yourselves in practice. You will be often consulted in such cases; your examinations will be watched by the patients and their friends with close and painful attention, and your decision awated with all the intense anxiety of minds haunted by the idea of scirrhus. You cannot, gentlemen, be too deeply impressed with the importance attached to such decisions, nor can you apply yourselves too assiduously to the difficult task of making a distinction between organic disease and functional disorder. I am sure I do not exaggerate when I say, that as many professional reputations have been wrecked upon this point, as upon any other connected with the whole range of medical science.

With respect to the present case, my impression is, that there is no organic affection of the stomach. My reasons for coming to this conclusion are these. In the first place, the disease has lasted with more or less violence, for the last four years, and without any remarkable increase. The cause which operated in giving rise to the gastric symptoms three or four years ago, and before the suspicion of organic disease could be entertained, is still in operation, or, in other words, there does not seem to be any recent modification of her ailment, any new change to destroy the identity between her past and present condition. In the next place, the very duration of the complaint is opposed to the idea of its being organic. Had it been organic, it would, in all probability, have terminated fatally before now; or, at least, it would have furnished unequivocal proofs of its existence. Scirrhus of the stomach seldom lasts for four years without exhibiting symptoms of its true nature. Again, the matter from her stomach was never tinged with blood, nor has it ever been of a black color, or consisting of a substance resembling coffee-grounds. Now, I need not tell you, that where organic disease of the stomach produces erosion of its mucous coat, and actual loss of substance, there will be an oozing of blood from the eroded surface, and that this blood will be either thrown up unchanged and of its natural color, or it may remain in the stomach until the fluids of that organ have acted on it, and then it will appear, when ejected, of a dark color, and broken down so as to resemble coffee-grounds. In the next place, there is no remarkable epigastric tenderness, and during the paroxysms, the pain, instead of being increased, is diminished by pressure.

Lastly, the extreme acidity of the fluid ejected from the stomach, is more an indication of functional disorder than of

organic disease. I do not lay much stress upon this point. but where a person who has been long subject to pain, nausea, and vomiting, throws up a fluid of an extremely acid taste, the disease is, *in the majority of cases, functional.* How are we to explain this? The acidity of the fluid ejected from the stomach in any considerable quantity depends on derangement of the secreting surface of that organ. As long as the secretion of the stomach is carried on in the natural way, it never becomes a source of annoyance; a certain quantity of acid gastric juice is poured out at certain periods in the day, and these periods correspond in the normal state with the times of taking food, or in other words, this acid juice is only poured out when it is necessary. But in states of deranged action, where the secretion is altered by functional disorder, the stomach pours out this acid juice in excessive quantity. You will find a patient affected in this way vomiting a fluid, which if it fell on powdered chalk or soda, would produce a brisk effervescence, in consequence of the large proportion of acetic and muriatic acid it contains. I have seen cases in which there was absolute corrosion of the teeth from frequent eructation of this extremely acid secretion.

It is clear, that the formation of acid in the stomach is merely the result of an alteration in its secreting powers, and not in consequence of any acetous fermentation of the ingesta. Now, this being the case, if the stomach be extensively diseased from disorganization, the consequence of scirrhous or cancerous ulceration, its secretion will be still further altered, and very frequently in such cases the products of secretion will not be so acid as they are in cases of functional disorder. Organic disease of deranges the functions of the stomach so much, that the secretion of acid is more or less interrupted, and hence we do not find the fluid ejected so sour as it is in functional derangement. I, therefore, look upon the extreme acidity of the fluid thrown up by this woman, as connected with functional disturbance rather than actual disorganization.

I am aware that the opinion is somewhat different from that advanced by Dr. Osborne in the 21st No. of the *Dublin Journal of Medicine;* Dr. Osborne seems to be of opinion that scirrhus and often cancer of the stomach are the results of functional disorder; there is nothing of which I am more convinced than that they are essentially different. I have known many persons afflicted for years, nay, for life, with the most aggravated form of *acid dyspepsia*, in whom no ten-

dency to organic disease ever displayed itself. That the slow process to which is owing the gradual formation of scirrhus of the stomach will often occasion *acid indigestion*, long before the scirrhus is formed or has reached any degree of maturity, no one will deny. Dr. Osborne has been anticipated in almost all the propositions he has advanced, by Dr. Prus, of Paris, in a book published several years ago, where the same means of averting scirrhus are recommended. I fear that neither Dr. Prus nor Dr. Osborne has as yet discovered this important secret. They certainly deserve our best thanks for the attention they have bestowed on the subject.

Acidity of the stomach is frequently, but not always, accompanied by gastrodynia or pain in the organ. In our patient, violent pain precedes the attacks of vomiting, and is occasionally present during the intervals. There is, however, no connection between pain and acidity of the stomach, for you frequently have severe gastrodynia in cases where the matter ejected has not the slightest acid taste. This is the case in pyrosis, where the fluid thrown up is quite limpid and tasteless. Here it is very probable that the fluid consists chiefly of the secretion of the pancreas.

In inquiring into the symptoms of which dyspeptic patients complain, you will find some with *weak stomachs and strong bowels*, while others have *strong stomachs and weak bowels*. The former complain of acidity, flatulence, distension and uneasiness of the stomach after meals, and have a capricious or indifferent appetite. They suffer much from eating certain articles, and are consequently obliged to be careful in the selection of their food. The digestion thus imperfectly performed in such cases by the stomach, is effected with more energy by the remaining portion of the intestinal canal, and hence the fæcal mass is quite healthy, and contains no unused alimentary matter. In order to enable the bowels to perform more efficiently the supplemental digestion, so necessary where the principal agent, the stomach, has left so much undone, the alimentary mass is detained longer than natural in the intestinal tube. In such persons, costiveness or a slow action of the bowels, is essential for the more complete solution and absorption of the nutritive portion of food which the stomach had, as it were, neglected. If by means of medicine or diet you promote a quick action of the bowels, and a speedy defecation in such persons, you impair the supplemental digestion, and injure rather than serve your patients. In cases of this description we frequently observe, that although

great disturbance of the stomach ensues after meals, yet there is little or no emaciation or loss of strength; the sufferers are often of robust, phlegmatic habit. The theory of digestion which attributed to the stomach the office of chymification—a step necessary for the more advanced process of chylification supposed to take place in the small intestines—this theory will not explain the phenomena observed in the above cases, for nutrition must, according to this theory, be impaired exactly in proportion to the degree in which the stomachic digestion fails. Here the theory of digestion which rests upon the authority of Tiedemann and Gmelin, comes opportunely to our aid. According to their experiments it appears that the nutritive efficiency of digestion depends on the solution and subsequent absorption of the soluble and nourishing portions of the alimentary mass. Now, solution and absorption are performed by the whole extent of the alimentary canal, but most energetically by the stomach and cæcum or commencement of the large gut, which two parts are the chief secretors of the acid solvents. From this it follows, that when the stomach fails to perform the whole of its duty, its deficiencies may be supplied by the intestines. The history of intestinal fiistula where the excrementitious matter is voided through an opening in the small intestines, proves that a man may live without the discharge of the functions which the large intestines are intended to perform on the alimentary mass. Again, those rarer cases of stomachic fistula which have been observed, almost suggest the possibility of life and nutrition being sustained, although imperfectly, without the aid of the stomach; for we cannot believe that this organ performs its functions with anything like natural energy, when it is placed in so unnatural a situation, and has suffered so much from previous disease and morbid alteration of structure. What is wanting in such cases to prove that nutrition may be carried on, nearly altogether independently of the stomach, is supplied by other organic diseases of that organ. Thus, in the case of Napoleon Bonaparte: the body was by no means wasted, on the contrary, there was a great accumulation of fat; "the fat was upwards of one inch thick over the sternum, and one inch and a half over the abdomen; upon opening the abdomen, the omentum was found remarkably fat, and on exposing the stomach, that viscus was found the seat of extensive disease; strong adhesions connected the whole superior surface, particularly about the pyloric extremity to the concave surface of the left lobe of the liver, and on separating these, an ulcer, which penetrated the coats of

the stomach, was discovered one inch from the pylorus, sufficient to allow the passage of the little finger. The internal surface of the stomach in nearly its whole extent was a mass of cancerous disease, or scirrhous portions advancing to cancer; this was particularly noticed near the pylorus; the cardiac extremity, for a small space near the termination of the œsophagus, was the only part appearing in a healthy condition."

Now, gentlemen, in this and similar cases, it is evident that no part of the digestive function had been performed by the stomach, probably for several weeks, or even longer, before death, and yet the body was so sufficiently nourished by the supplemental action of the small intestines, that we are almost tempted to believe that if by a miracle, the cancerous mass including the whole stomach had been removed, and had been replaced by a portion of the duodenum, the individual might have lived for a time! But to return to our subject—where the stomach is strong, but the intestines weak, there is generally an excellent appetite, and the patient is a great eater—he never suffers from distension of the stomach, uneasy feelings, acidity, flatulence or heart-burn after meals, however he may have indulged; he boasts, and justly, that nothing ever disagrees with his stomach. He is nevertheless lean and ill-thriven; the reason is because his bowels do not possess the same energy with the stomach, and consequently do not perform their part of the business of digestion well; this is evident from the frequent and sudden attacks of looseness to which such persons are liable; their discharges are irregular, but on the whole, the quantity of matter discharged *per anum* is much greater than it ought to be; they seldom pass solid healthy colored stools—there is evidence of a hurried secretion of bile, and a too rapid passage of the alimentary mass through the intestines. The fæces are therefore during their occasional attacks of indigestion crude and semi-digested, and almost constantly fluid or semi-fluid; such persons have two or three bilious, loose motions every day, and generally enjoy in other respects tolerably good health.

Having pointed out these varieties of weak digestion, varieties which have scarcely been noticed by authors, but which nevertheless deserve especial attention, I shall conclude by observing that the distinction between organic disease and functional disorder of the stomach is attended with extreme difficulty, and is to be drawn not from any one symptom, but

from an attentive consideration of the history of the case, and the effects of remedies.

I have seen cases of indigestion, vomiting, and extreme emaciation continue for month after month, until every medical attendant of the patient believed that death from organic disease was at hand, and yet the patient perfectly recovered; on the other hand I have seen the stomach ailment trifling when organic disease was extensive. I am anxious to impress this upon your minds lest you may be misled by anything I have said in a previous part of the lecture, and lest you should think that I attach undue importance to any one symptom, as for instance, the morbid secretion of acid by the stomach. Dr. Osborne seems to look upon this rather as a symptom of commencing scirrhus; in this I cannot agree with him; probably we are both wrong; it probably cannot be relied on as characteristic either of functional disorder or of organic disease.—*Medical Times.—Medical News and Library.*

The Secrets of Homœopathy—Hahnemann and his System. By Dr. Schubert, of Dramburg. We hear it continually asserted that Hahnemann placed no confidence in the powers of nature in curing disease; but from my intercourse with him, I am quite satisfied that no physician ever trusted more to the *vis medicatrix naturæ*. It requires, indeed, but very little reflection to enable us to perceive that it was through the closest acquaintance with the curative powers of nature that Hahnemann was led to adopt his new system of medicine. I have heard him declare that he looked with contempt upon medical practice, and he thought that a patient would be none the worse if left to himself. He had a thorough conviction that all curable diseases might, under proper attention to diet, be removed by the efforts of nature alone; he looked upon these as his sheet-anchor. On one occasion he said to me—"I give medicines but very seldom, although I always prescribe small powders! I do this for the sake of keeping up in the patient's mind the firm belief that each powder contains a particular dose of some medicine! Most patients will get well by adopting a simple mode of living, and by placing a boundless confidence in their medical attendants. Ordinary practitioners know nothing of this practically, although they are always talking of the healing powers of nature. If a patient recover under their treatment, they

immediately ascribe it to the nauseous drugs which they have poured into him, although these commonly do more harm than good." He never hesitated to promise recovery to every patient without concerning himself about the nature of the malady; and I have seen some most ludicrous results follow these predictions. His plan was to demand for the cure in the shape of a fee, a good round sum—one-half to be paid down—*unlimited confidence* in his treatment—doses of sugar of milk, and a particular diet! The dieting, which simply consisted in the denial of all stimuli, he considered to be absolutely necessary in order to allow nature to have free play. *Unlimited confidence* in the treatment was his great support in carrying out this system; and he invariably insisted upon this from every patient, well knowing that it was the important secret of life and death in such cases. Further, he used to observe—"We must not attend patients for nothing, or let them have even a pennyworth of medicine gratuitously; the greater the sum paid for physic and physician, the greater is the confidence placed in both."—*London Med. Gaz.*, from *Casper's Wöchenschrift.—Ibid.*

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LOUISVILLE, OCTOBER 1, 1845.

DEATH OF PROFESSOR RICHARDSON.

Died, on the 14th of September, at his residence near Lexington, Dr. William H. Richardson, Professor of Obstetrics and the Diseases of Women and Children in Transylvania University. The disease which terminated his life is said to have been typhoid fever, of which cases appear to have been occurring in Lexington and its neighborhood for two years past. The deceased, up to the time when he was seized with this fever, was in vigorous health, and, as he was of a longlived family, was looking forward to a green old age.

Dr. Richardson was a native of Kentucky, and of the county in which he spent nearly all the years of his active life. He studied medicine in Lexington, and afterwards attended medical lectures in the University of Pennsylvania. His primary education was much neglected, and he entered upon the practice of his profession in the spring of 1806 after hearing a single course of lectures. He settled in Georgetown, where he resided up to the commencement of the war in 1812. In the autumn of that year he went out as surgeon with one of the volunteer Kentucky Regiments after the downfall of Detroit; but was sent back with a sick officer. About this time he removed to Lexington, and in the year 1815 or 1816 was appointed Professor of Obstetrics in Transylvania University, then in a forming state. In 1816-'17 he delivered a few lectures on obstetrical medicine, but the University class was not organized until the

full of 1817: he then, in connexion with Drs. Blythe, Dudley, Drake, and Overton, delivered a full course. In the spring of 1818, after having been before the public as a teacher, he received the honorary degree of M. D. from the University of New York. In 1819 the medical department of Transylvania University was reorganized, and he resumed the duties of the chair which he continued to hold up to the time of his decease. He has the honor, therefore, of having been connected with the first scheme for medical teaching in the Valley of the Mississippi, and of those who were associated with him in the beginning he leaves but one behind him in the school. Of his earliest colleagues Dr. Dudley, Dr.. Drake, and Dr. Overton survive him, but Dr. Dudley alone remains in Transylvania of the five professors who renewed the enterprise in 1819. Dr. Brown was the first to resign his place in the school, which he did in the spring of 1826, and the first also to pay the debt of nature, an event which took place not many years after his resignation. Dr. Blythe followed him in the order of his resignation and death, and Dr. Caldwell has been removed to a new theatre, where he is still zealously engaged in teaching. Dr. Richardson held on for more than a quarter of a century to the chair of his first choosing. Many resignations have occurred in that school from year to year; he never resigned. Dr. Drake gave up his professorship a second time, after four years' experience in the school, and subsequently four out of the six members of the Faculty came to the Medical Institute of Louisville; but Dr. Richardson, while he was sensible of the superior advantages which this school would enjoy, made up his mind to continue in the institution which he had been instrumental in building up. Amid all the changes which have since taken place in Transylvania, he remained fixed where started.

The wonder has often been expressed, that a teacher so deficient in everything like scholarship should have been able to maintain so respectable a rank for so many years. Professor Richardson's education unquestionably was very limited. He was totally ignorant of every language except our own, and even of that he possessed but an imperfect knowledge, insomuch that he had a repugnance to writing, and hence has left behind him in a durable form but little of his experience acquired during nearly forty years of diligent practice.

It cannot be denied that this destitution of preliminary learning detracted from his dignity and usefulness as a teacher, for young men, struck with his grammatical blunders, were too prone to conclude that he must also be wanting in professional knowledge. It was the impression of his first classes that he appropriated not only the thoughts but the language of Burns too extensively in his lectures; but his judgment and ability as an obstetrical practitioner were never questioned, and by much reading it is certain that he made amends, in subsequent life, for the imperfections of

his early teaching. He never became a scholar; but he corrected, one after another, the more glaring faults which provoked the merriment of his first pupils, and, what was of still higher consequence, kept his mind informed of all the improvements in his branch of the profession. As he never aspired to originality, and had no cherished theory to defend, his understanding was ever open to conviction, and he was prepared to welcome knowledge from whatever quarter it might approach him.

If we were asked upon what did his success as a teacher depend, we should answer, mainly upon his social qualities. These attached strongly to him a large body of his pupils, and made him a favorite in the community of which he was an active member. Students, who felt a warm personal regard towards him, could make liberal allowances for the absence of literary grace in his lectures. But to many amiable social qualities, and many manly traits of character, he added, also, a style of lecturing which pleases the ear of Western young men. His elocution, indeed, with the finish which a correct knowledge of his native language would have imparted to it, would have been highly pleasing, and even impressive. His manner of speaking was loud, earnest, and oftentimes vehement, after the fashion of the stump. He was of a bold, impulsive temperament, and his confident air, aided by an agreeable voice, fixed the attention of the less fastidious portion of his audience. When to all this we add, that he was experienced as an obstetrician, and was reputed to possess peculiar skill in that department, we have, perhaps, the elements which contributed chiefly to maintain him, in spite of his acknowledged deficiencies, for so long a time in his elevated position before society. Undoubtedly, he was much better versed in medical science than in letters, and in our profession, we know, that instances are not wanting, of men attaining to the highest rank with the slenderest literary acquisitions. John Hunter would have made an exceedingly sorry figure among scholars, but, nevertheless, he made himself the first surgeon of his age.

Professor Richardson was greatly beloved by his private pupils, and his memory will be held in grateful remembrance by many who shared in his personal kindness. Of those whom he instructed some are now teachers themselves, from among whom it would seem meet that his successor should be chosen.

This hasty notice has been written without the materials necessary for a biographical sketch of the deceased, but some friend familiar with his history, we hope, will favor the profession with an extended memoir of his life and character.

We are happy to be able to add, that Professor Richardson was many years a member of the Baptist church, and that he was calm and resigned in view of his approaching dissolution.

LIGHTNING RODS.

Hitherto, in the Western States, the lightning rod has been very generally neglected, whether because accidents by lightning have not been so frequent as to arrest public attention, or because the efficacy of the conductor is distrusted by the public, we do not at present propose to inquire; but the fact is, that in town and country comparatively few houses will be found thus secured. We incline to believe that the value of the protector is gaining upon the confidence of the people, and to answer the frequent inquiries made of us as to the best mode of erecting the rod, we have determined to write a short article on the subject.

In a letter which we received some time since, the following questions among others were asked:—

"Is there any advantage in having the rod painted black, or any other color? Should the rod be fixed firmly to the top of the chimney, or would a slight motion affect its conducting power? Will the fluid take a lateral direction from the rod if properly constructed; and is there any additional security in having the point made of solid silver? The house being 28 feet long, with a chimney at each end, how far ought the rod to extend above the highest part of the building, and would there be an advantage in having the rod in the centre, or in having two rods? Would the protection be greater from having the two rods connected by a cross wire or rod along the comb of the house, or would such an arrangement be safe? Is there any such thing as the lightning being drawn down between two rods, or any superior efficacy in a number of rods affixed to the several chimneys of an extensive building? Some recommend copper rods, but would not this metal be melted by a heavy charge?"

The writer goes on to say that he has "a rod by the side of his chimney rising 10 feet above it, plated at the point, going 12 feet in the ground to permanent moisture, not painted, and fastened to the chimney by wooden cleats." He asks whether "it would be safer to take it from the chimney, and erect it at the side of the bulding, or to put another at the other end, and if so whether it would be best to have them connected by a rod along the roof?"

A short extract from Daniell's Introduction to Chemical Philosophy answers most of these questions, and as it gives what doubtless is a true account of the *modus operandi* of the lightning rod, we suppose we could not do better than to give it in this place. He says—

"An objection, founded on ignorance, has sometimes been made to lightning rods, that they may, by their attractive power, invite a discharge where otherwise it would not have taken place. But when it is considered that one of the conditions of a thunder storm is an intense electrical induction of a portion of the earth's surface through a dry stratum of air to the surface of a cloud of some thousands of acres in extent, in the manner of a Leyden jar, it will be perceived that any such elevation as

compared with the distance and extent of the charged clouds, is utterly inconsiderable, and perfectly inadequate to influence the charge in the slightest degree. The conductor is perfectly passive, and its efficacy consists in opening an easy path by which the force may be transmitted. Its action is but at best of a negative kind, and it can no more be said to attract the lightning than a water-course can be said to attract the water which necessarily flows through it at the time of heavy rains."

In Franklin's works these objections are stated at length as they were formally laid before the Royal Society of London by one of the philosopher's cotemporaries. They will be read with interest as a part of the history of electricity.

"Mr. Benjamin Wilson, one of the committee appointed by the Royal Society of London, to inquire into the propriety of fixing conductors for securing the powder magazines at Purfleet, from lightning, dissented from the opinion of Franklin, Cavendish, Watson, and Robertson, the other members, as to the effect of *pointed* conductors. His words are, 'I dissent from the report in that part only which recommends that each conductor should terminate in a *point*.

"'My reason for dissenting is, that such conductors are, in my opinion, less safe than those which are not *pointed*.

"'Every *point*, as such, I consider as *soliciting* the lightning, and, by that means not only contributing to *increase* the quantity of every actual discharge, but also frequently occasioning a discharge, where it might not otherwise have happened.

"'If, therefore, we invite the lightning while we are ignorant what the quantity or the effects of it may be, we may be *promoting* the very mischief we mean to prevent.

"'Whereas, if instead of pointed, we make use of blunted conductors, those will as effectually answer the purpose of conveying away the lightning *safely*, without the tendency to *increase* or *invite* it.'"—*Franklin's Works, vol. V., p.* 434. *See Philos. Trans. vol, LIV. p.* 247.

The view of Prof. Daniell very much simplifies the whole affair of the lightning rod. It is, that it acts by "*opening an easy pathway*" for the electrical fluid. What is requisite then is, that the rod should be large enough, without any break from top to bottom, and terminate in a good conductor below. If there be any interruption in it, the fluid will pass with less facility, leaping from one broken end to the other, instead of flowing on in a continuous current. And so, too, if the termination below be in a dry bed of clay or sand, the charge cannot escape readily, and the power of the rod is greatly impaired. Water is the best conductor that offers in most situations, and its power is computed to be two hundred thousand times less than that of iron. In cities where there are gas or water pipes, the best possible conditions exist for rendering the rod effectual, for connected with a mass of metal extending miles under ground, it would offer the most perfect door to the fluid that could be imagined.

We are not sure that the importance of this point has not been exaggerated; certain it is, at least, that houses have been protected by rods erected in the clumsiest possible manner. In one case the charge passed down a rod which had been broken several feet from the ground, and from the extremity suspended in the air leaped to the earth. In another case the tin gutter and pipe conveyed the fluid to the ground, taking a man who chanced to be near in its progress. This example is instructive. At the sound of thunder this individual went to the water barrel to place it under the spout, and was standing near the spout when the chimney of the house was struck. The fluid entered his body through his watch, which was in his vest pocket, and descended into the earth. He was severely stunned, but recovered from all alarming symptoms in a few minutes. The chimney was a good deal shattered, and some of the shingles torn up, but the whole charge passed down the tin gutters, and the persons in the house escaped unhurt.

Assuredly it is safer to have a good conductor at the end of the rod in the ground, but these facts, we think, are sufficient to show, that a rod which has no better termination than the common earth is not wholly inefficacious. We have been inclined to attach but little consequence to the termination in points above; but from a communication recently in the newspapers, we see that Professor Hare is disposed to insist upon them. "Under ordinary circumstances," he says, "the competency of lightning rods is dependent on the pointed form given to the upper end, which prevents the electricity from being received above in greater quantity than it can get off through the soil below."

Upon the view given by Daniell, which we adopt; we do not perceive how the point can exercise much influence; at the same time we would not discourage the common practice of furnishing good points to the conductor, which may be attended by greater security. Professor Hare, in the same communication, urges the importance of attaching the lightning rod to the "westernmost part, and preferably the northwesternmost end or corner of the building." He adds, "I am under the impression that all thunder-gusts, in this part of the world, come from the westward. We have sometimes storms from the southwest, accompanied by diffuse electrical flashes, but such genuine thunder-gusts as produce dangerous discharges of concentrated lightning, agreeably to my observations, come always as above stated."

Coils of copper wire, half an inch in thickness, are used in Germany, and as copper is a better conductor than any of the less costly metals it affords, perhaps, the most desirable material, but iron is good enough. And as to number, it may be said, the more the better. It has been recommended to connect the lightning rod with the tin gutters, and the suggestion is unquestionably a good one. A house covered with a me-

tallic roof, and having a sufficient number of conductors going into water, or connected with gas or water pipes, we have been in the habit of saying, would be *lightning proof*. The usual directions given are to extend the rods about ten feet above the chimney. For a small building one rod is probably sufficient, but for powder magazines, and for buildings of great extent, two or more would certainly increase the safety.

Y.

VACANCY IN TRANSYLVANIA UNIVERSITY.

From the following notice it will be perceived, that the appointment of Professor Richardson's successor is not to take place before the last of January next, and that the instruction in that chair is to be given, in the interim, by Dr. Mitchell, the Professor of Materia Medica.

"*To the Medical Public.*—The chair of Obstetrics and the Diseases of Women and Children in the Medical Department of Transylvania University, is at present vacant; and with a view to fill it in the best possible manner, applications for the place are invited from the members of the Medical Profession. Communications on the subject must be forwarded to the Dean of the Medical Faculty prior to the 30th day of January next, when the appointment will be made. It will be required, in conformity with a resolution of the Board of Trustees, that the person selected shall make Lexington his permanent residence.

"The name of no one but the successful candidate will be made public.

"M. C. JOHNSON, Ch'm. B. T. T. U.

"Lexington, Sept. 20, 1845."

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"*The Vacant Chair of Obstetrics.*—The above refers to a *permanent* appointment. The duties of the chair, for the coming session, will be performed by the Professor of Materia Medica and Therapeutics, Dr. Mitchell."

RUSH MEDICAL COLLEGE.

From the annual circular of the Rush Medical College we learn that William B. Herrick, M.D., favorably known in this city as a laborious and minute anatomist, has received the appointment of Professor of General and Descriptive Anatomy in that institution. The selection, we have reason to believe, will be satisfactory to the friends of the school. If Dr. Herrick's powers as a lecturer should prove to be equal to his industry and attainments as an anatomist, he must take a high rank among western teachers. The cordial wishes of his Louisville friends attend him in his new career. The lectures in this College commence on the first Monday in November and continue 16 weeks.

Y.

THE CASE OF DR. BAKER—MURDER—MONOMANIA.

Dr. Abner Baker, a reputable physician, of the most respectable family and connexions, killed his brother-in-law, Daniel Bates, a highly esteemed citizen of Clay county, in this State, about a year ago, and after an examination before the usual tribunal in such cases was discharged on the grounds of lunacy. He spent the winter in Havana, and while absent the Grand Jury found a verdict against him of murder. On his return in the spring his friends gave him up; he was tried at a special term of the Circuit Court, of Clay county, in June last, and found guilty. The plea of *monomania* was set up in his defence, and the testimony to that effect of several physicians, among whom was the late Professor Richardson, was clear and decided. The Governor of the Commonwealth has been petitioned to pardon on that ground, but has refused to grant the prayer. We are assured that nine out of twelve of the jury are among the petitioners, and that they express a full conviction that Baker is a monomaniac. As far as we are informed, every physician who has heard or read the testimony in the case is of the same opinion. At the request of a brother of Dr. Baker we examined, some weeks ago, a transcript of the evidence, and from what was submitted to us we did not entertain a single doubt as to his insanity. The same record was read by several of our medical friends who concurred fully with us in this opinion, and the result was that we expressed to the Governor our belief that the unfortunate man was a fitter subject for the mad-house than the gibbet. We do not know how nearly this sentiment is universal among the medical men who have investigated the case, nor are we going to say how far the opinions of such witnesses ought to prevail with the Executive; but we suppose there is no arrogance in saying, that, as to a question of insanity, no men in the community are as competent judges as physicians. We do hope that the Governor will, at least, still further extend the respite which he has granted, and that all doubt of the lunacy of the prisoner will be removed from the public mind, if indeed he is not insane, before he is made to pay this dread penalty. The moral effect of his execution while such a doubt hangs over the case, we are thoroughly persuaded, would be most injurious.

Y.